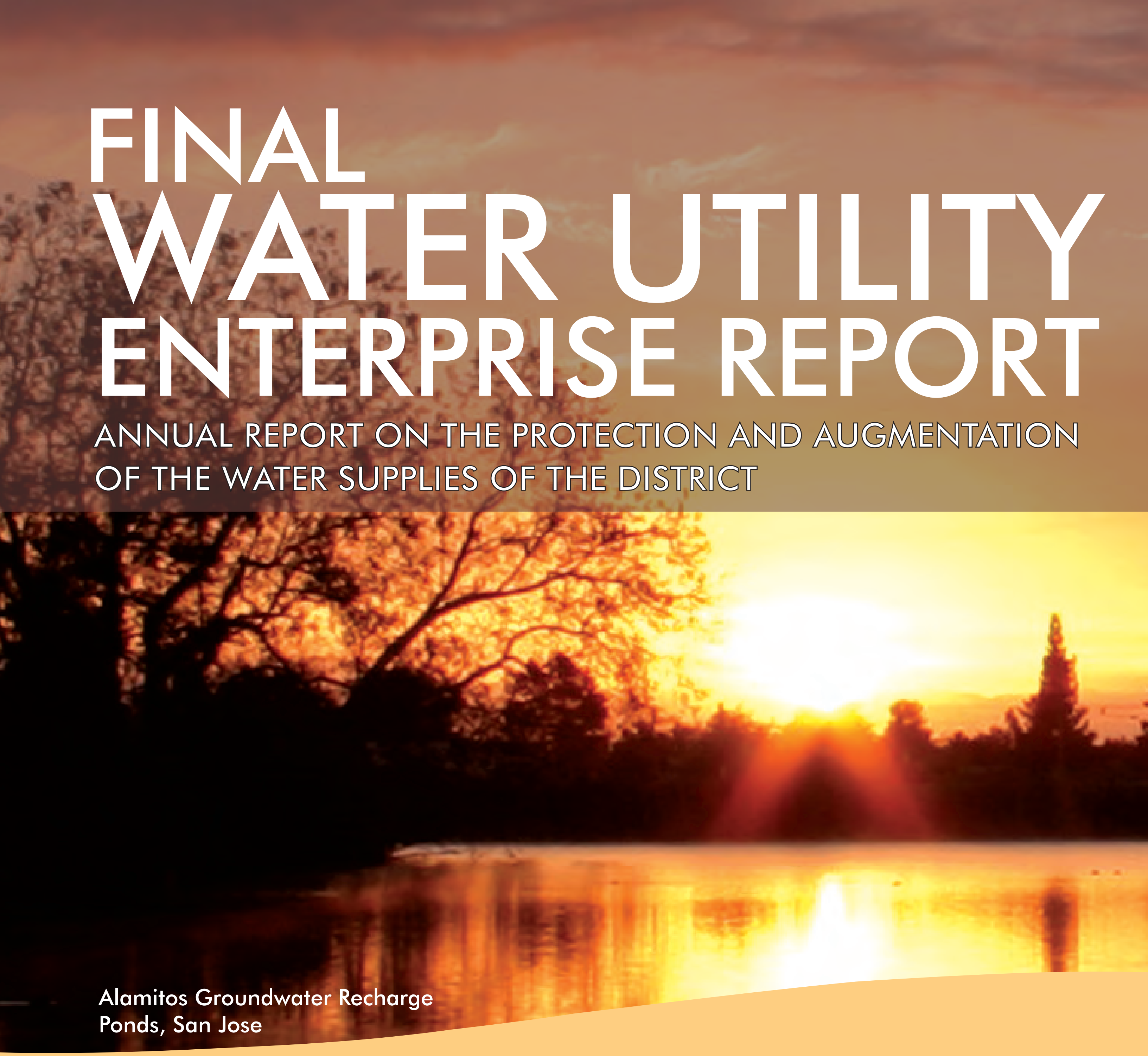
FINAL WATER UTILITY ENTERPRISE REPORT

ANNUAL REPORT ON THE PROTECTION AND AUGMENTATION OF THE WATER SUPPLIES OF THE DISTRICT



Alamitos Groundwater Recharge
Ponds, San Jose

October 2007

Santa Clara Valley
Water District

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Santa Clara Valley
Water District

5750 ALMADEN EXPWY
SAN JOSE, CA 95118-3686
TELEPHONE (408) 265-2600
FACSIMILE (408) 266-0271
www.valleywater.org
AN EQUAL OPPORTUNITY EMPLOYER

October 15, 2007

Dear Board Members:

The *Water Utility Enterprise Report, Final October 2007: Annual Report on the Protection and Augmentation of the Water Supplies of the District* presents the water supply information that is the basis for the adopted groundwater charges for fiscal year 2007–08. This report documents the water charges adopted for fiscal year 2007-08 and updates information provided in the preliminary report, which was filed in March, in conformance with the Santa Clara Valley Water District Act.

Within Santa Clara County and throughout the world, construction costs have been escalating at unprecedented rates. Not only are the costs of raw materials going up due to increasing global demand, but also competition for contractors has increased due to large regional infrastructure investments. There is no end in sight to this phenomenon and the impact to future costs is staggering. The District is taking action now to minimize this impact by reviewing the scope of planned capital projects for potential reductions, accelerating project schedules to lower overall costs and streamlining the project delivery process to encourage lower bids from contractors.

The construction cost escalation issue exacerbates the number one strategic challenge identified by District staff, which is "Managing district assets to minimize risk of failure to provide reliable products and services." Simply put, we must invest in maintaining and rehabilitating existing facilities now or face the consequences in the future.

Perhaps the most important and precious public assets in the county are the three groundwater basins. All of the District's above-ground water utility facilities directly or indirectly help maintain the groundwater basins by facilitating the recharge of surface water into the ground or by delivering alternative sources of water, which in turn preserves groundwater. Keeping the groundwater basins full is the best defense against drought and/or major disaster.

The District is not alone in facing the challenges of rising construction costs and facility maintenance. Retail municipal and investor-owned water utilities in the county are dealing with the same issues and the District is committed to working more closely with them to keep the cost to consumers to a minimum. In fact, I added the word "together" to the District's vision, which now reads "Getting Cleaner, Greener, and Leaner…Together." The revised vision emphasizes our desire to not only be more effective as a team internally, but to work closely with our customers and partners externally to set priorities and address common issues.

This year's groundwater charge projection reflected a range of potential groundwater charges over the next ten years depending on the level of service provided. The higher end of the range represented the groundwater charges necessary to fund capital projects and operations costs that would be delayed indefinitely at the low end of the range. Staff recommended a groundwater charge at the low end of the range. Accomplishing the task of providing a safe and reliable water supply at this funding level next year and into the future would require resolute prioritization, collaboration with our customers and partners, and continuous improvement in our ability to deliver products and services. The Board's adopted charges will provide an estimated $ 1.3 million more revenue than staff's recommended charges. This allows for critical preventative and corrective maintenance activities at existing District facilities to be included in the FY 2007-08 budget, and aims at ensuring a reliable water supply.

The water charge adopted for FY 2007–08 North County Municipal and Industrial groundwater charge is $475 per acre-foot, a 9.2 percent increase. The adopted agricultural groundwater charge in North County is $15.50 per acre-foot, a 28% decrease. This decrease was adopted to keep agricultural water charges reasonable given the decision to phase out the District's agricultural discount programs. The total adopted treated water charge is $575 per acre-foot, a 7.5 percent increase. The adopted increases translate to an increase of $1.38 per month for the typical residence using 1,500 cubic feet of groundwater per month and $1.38 per month for a typical residence being served treated water.

The adopted South County Municipal and Industrial groundwater charge is $255 per acre-foot, an increase of 10.9 percent. The adopted charge translates to an increase of $0.86 per month for a typical residence using 1,500 cubic feet of groundwater per month. The adopted agricultural groundwater charge is $15.50 per acre-foot, a 28 percent decrease. As in the North County, this decrease was adopted to keep agricultural water charges reasonable given the decision to phase out the District's agricultural discount programs.

The attached report also includes historical data on District water supply and demand and describes the benefits of the District's activities that underlie the need for the adopted groundwater charges. The final section discusses the revenue requirements for the upcoming fiscal year and provides financial projections for the next ten years.

Sincerely,

Stanley M Williams

Stanley M. Williams
General Manager

Final **October 2007**

Santa Clara Valley Water District℠

Water Utility Enterprise Report

Annual Report on the Protection and Augmentation of the Water Supplies of the District

Marty Grimes
Program Administrator

Linda Louie
Senior Management Analyst

Sheri Oesterreich
Management Analyst II

Darin Taylor
Senior Project Manager

Under the Direction of
Walt Wadlow
Assistant General Manager
Water Utility Enterprise

District Board of Directors

Rosemary C. Kamei, Vice Chair – District 1
Joe Judge– District 2
Richard P. Santos– District 3
Larry Wilson– District 4
Patrick Kwok – District 5
Tony Estremera, Chair – At Large
Sig Sanchez – At Large

Our Mission

The mission of the District is a healthy, safe,
and enhanced quality of living in Santa Clara County
through watershed stewardship and comprehensive
management of water resources in a practical,
cost-effective, and environmentally sensitive manner.

Santa Clara Valley Water District Board of Directors

From left to right: Joe Judge, Richard Santos, Patrick Kwok, Sig Sanchez, Rosemary Kamei, Larry Wilson, Tony Estremera

Rosemary Kamei
Vice Chair - District 1

Joe Judge
District 2

Richard P. Santos
District 3

Larry Wilson
District 4

Patrick Kwok
District 5

Tony Estremera
Chair - At Large

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At Large

Preface

This is the 36th annual report on the status of the Santa Clara Valley Water District's (District) activities in the protection and augmentation of the water supplies of the District. In accordance with Section 26.5 of the District Act, this report provides information on the present and future water requirements of the District, the water supply available to the District, future capital improvement and maintenance and operating requirements, financing methods, and the adopted FY 2007-08 water charges by zone for agricultural water and nonagricultural water.

The mission of the District is a healthy, safe and enhanced quality of living in Santa Clara County through watershed stewardship and comprehensive management of water resources in a practical, cost-effective and environmentally sensitive manner. The District's core businesses include management of groundwater resources, flood protection and stream stewardship as part of its watershed operations, and wholesale water supply. The District provides a safe and reliable water supply to the county's nearly 1.8 million residents.

This annual report is intended foremost to communicate to water users who pump groundwater managed by the Santa Clara Valley Water District. This report presents the proposed groundwater extraction charges that will enable the District to manage the county's water resources in the upcoming fiscal year.

Over the years, some well users have questioned why the District imposes charges for extracting groundwater at all, wondering why they should be charged for the water they pump from beneath their own property. The reality is that the groundwater being pumped exceeds what is naturally replenished. Without the District's groundwater management, land subsidence would have continued and local aquifers would no longer produce water.

Camden Groundwater Recharge Ponds

To the individual well owner, the artificial groundwater recharge program can be the difference between a producing well and a dry well. For example, groundwater levels in the Llagas subbasin in the South County could have dropped more than 100 feet since 1987 if there were no artificial recharge program. Pumpers with deep enough wells even to reach those depths would be using about twice the amount of electricity to lift water to the surface. Shallower wells would have stopped producing any water.

Our groundwater basin is a public asset that we all depend on. This report presents what activities the Santa Clara Valley Water District will undertake in the next year to manage the groundwater basin so that it continues to serve as an essential water supply.

Managing groundwater is the reason the Water District was formed and it remains the District's most important mission. While local groundwater resources make up the foundation of our water supply, they cannot meet the needs of county residents, agricultural users and businesses alone. To make up for this shortfall, the District secures other sources of water to replenish aquifers, treats water at three treatment plants and promotes more efficient water use.

Groundwater makes up about half of all the water used in Santa Clara County. Some of our local and imported supplies are artificially recharged to three local groundwater subbasins for storage, transmission, and filtering. A complex system of recharge ponds, stream diversions, pipelines, canals, streams and reservoirs can process up to 150 million gallons of water a day--more than our largest water treatment plant. The groundwater subbasins are our most valuable asset, able to store more than three times the water of all our surface water reservoirs combined. Just as it has been for more than 75 years, the District's groundwater management goal is to ensure that groundwater resources are sustained and protected, to ensure a reliable and healthful water supply for residents of Santa Clara County today and for many years to come.

To appreciate the importance of our groundwater management activities, it is helpful to reflect on the history of water use in the county and the origins of the Santa Clara Valley Water District.

Yesterday…

Reliance on groundwater in Santa Clara County goes back to Civil War times: by 1865, there were close to 500 artesian wells in the valley and already signs of potential misuse of groundwater supplies. By 1921, many of the areas where water naturally ponded in the recharge zones were converted to farmland thus reducing the effective natural recharge capacity of the groundwater subbasins. It was established that far more water was being pumped from the ground than nature could now replace. The forerunner of today's District was formed with the initial mission of stopping this groundwater overdraft. While overdraft resulted in ground surface subsidence which increased flood risks, farmers were concerned about the sustainability of the water supply in the growing valley.

The initial efforts to combat overdraft included in-stream gravel dams to increase percolation and the creation of reservoirs to capture winter flows for gradual release through spring and summer, increasing the groundwater recharge. This remains the primary function of most of the reservoirs in the county. As a result of these facilities, the late 1930s to 1947 marked a period of recovery in groundwater levels that reduced subsidence. In 1947, conditions became dry, groundwater levels declined rapidly and subsidence resumed. In 1950, almost all of the county's water requirements were met by water extracted from the groundwater basin, resulting in continued decline of groundwater levels in the northern subbasin.

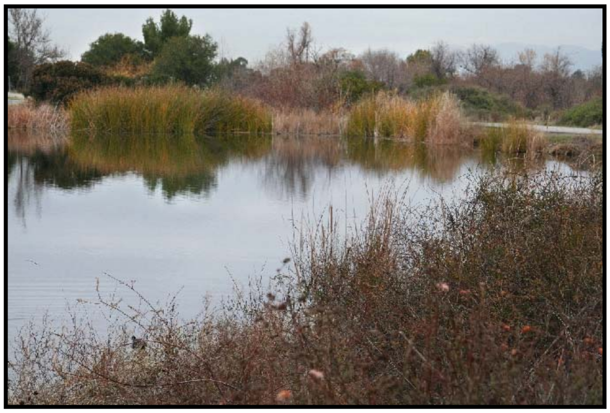
This time, water retailers looked outside the county for more water: the first imported water was delivered by the water retailers in northern Santa Clara County through the Hetch-Hetchy southern aqueduct in 1952. The population doubled in each of the following two decades, and to supply this growth, groundwater pumping increased and groundwater levels continued to decline. By the early 1960s, it was evident that the combination of Hetch-Hetchy and local water supplies could not meet the area's water demands, so the District contracted with the state to receive an entitlement of 100,000 acre-feet (AF) per year through the South Bay Aqueduct (SBA).

The 1960s saw the addition of another measure to try to restore the groundwater basins: in 1967, the District started delivering treated surface water to residents of the Santa Clara Valley Subbasin, thus reducing the need for pumping. The combination of imported water recharge and treated water sales that offset groundwater pumping led to a reversal in the decline of groundwater levels and reduced the rate of subsidence as well.

The semiconductor and computer manufacturing industries contributed to almost 34 percent of the job growth between 1960 and 1970, a shift from Santa Clara County's origins as an agricultural county. This transformation was not without its problems. In the early 1980s a major underground tank storing a solvent for a manufacturing process in south San Jose was discovered to be leaking and the District's attention focused on water quality of the groundwater basin. Starting in the 1980s, the District achieved nationwide recognition in groundwater cleanup site oversight.

Additional water treatment plants were added to the District system in 1974 and again in 1989; additional water was also imported into the District, this time through a contract with the federal government, for the delivery of an entitlement of 152,500 AF per year of imported water from the Central Valley Project (CVP) through the San Felipe Project. These facilities were critical for reversing the decline of groundwater levels that began with the onset of drought in 1987. By the mid-1990s, groundwater elevations had returned to levels not seen since before 1920.

…And Today


Oka Groundwater Recharge Ponds

Groundwater elevations the past decade are finally where we have wanted them to be since the District was established. Rather than continuing a battle of catch-up, the District now has the opportunity to plan for a future starting with healthy groundwater basins. The 2003 Integrated Water Resources Planning Study evaluated the District's ability to meet future water supply needs in the future, including looking at our vulnerability to potential risks like global warming, Delta levee failure, earthquake and drought.

This study clearly recognized the growing importance of the groundwater subbasins, and the need for comprehensive water supply management and resource protection. One of the key findings of the IWRP study was that "securing the baseline is the top priority for ensuring reliability," which means we need to focus first on making sure all of our existing water supplies remain usable and available. Another key finding was that "local supply decreases vulnerability to risk," pointing to the fact that our best investment is in maintaining our ability to use the groundwater basin to its maximum potential.

A key recommendation was to expand groundwater management: "the local groundwater basin supplies nearly half of the water used annually in the county and also provides emergency reserve for droughts and outages. The District should develop facilities to utilize this resource during emergencies, particularly outages to the treated water system, and to further conjunctive use." "Conjunctive use" refers to the use of surface water to augment groundwater supplies. With our active groundwater management, "conjunctive use" means excess surface water can be stored underground for use during dry periods.

Getting through multiple year droughts (such as the 1987-1992 drought) requires having as much groundwater saved in prior wet periods as possible – being able to withdraw from those reserves is critical for avoiding water use cutbacks and shortages. Meeting water reliability targets requires maintaining full groundwater basins in reserve for droughts and crises. For us, the old adage should be "Saving for a not-so-rainy day."

Groundwater management is critical to keeping pace with increasing challenges: increasing water demand with new development, changing climate, ongoing threats to water quality, and emerging challenges with our imported water supplies. But as the District enters its next 75 years, continuing to expand the flexibility of our water management tools remains critical to keep pace with increasing challenges, in both water supply and water quality management.

Please email any questions you may have regarding this publication to Marty Grimes, Program Administrator at the following e-mail address, mgrimes@valleywater.org.

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1. SANTA CLARA COUNTY WATER REQUIREMENTS AND SUPPLIES

2007 WATER SUPPLY OUTLOOK

Locally, the 2006-2007 rain season was abnormally dry. An unusually dry January was followed by an unusually dry February. A few strong storms at the end of February improved the outlook, but March and April produced little precipitation. In-flows to the District's 10 reservoirs were about 10 percent of normal. The Sierra snow pack, the state's largest water storage "reservoir" was at about half of normal as of April 2007.

Because of the wet spring in 2006, local reservoirs started 2007 with storage levels well above average. With so little inflow into local reservoirs since then, the District prepared for nearly dry reservoirs and many dry creeks in the summer of 2007. These conditions have curtailed recreational uses of some reservoirs and caused impacts to fish and other wildlife. Despite these regrettable impacts of the dry weather, the water supply outlook for 2007 remains good.

While reservoir levels are a visible indicator of our local water supply, the majority of our reserves lie in our local groundwater aquifers, also called subbasins. Even with the lack of rainfall and the below-average snow pack, the Santa Clara Valley Water District is in a very good position to meet Santa Clara County's water supply needs. This is a result of a series of above-average rain years and the District's management of water resources to increase water supply reserves. Currently, our local aquifers generally have good storage levels. Because our aquifers can store three times more water than all of the local surface water reservoirs combined, Santa Clara County depends on groundwater to maintain an adequate water supply during extended periods of dry weather.

In the late spring, however, new challenges to our imported water supplies emerged. To protect the endangered Delta smelt, the state and federal pumps that draw water from the Delta were curtailed for nine days in June. This shutdown forced the District to tap into local water sources that could have been conserved for future use. Ongoing litigation and the health of the ecosystem continue to threaten the operation of the state and federal pumps. A court decision in August may significantly reduce the availability of imported water supplies in 2008.

DISTRICT WATER SUPPLIES AND USE

The District's water supply includes water imported from the Sacramento-San Joaquin Delta, local water stored in reservoirs and groundwater subbasins, water banked in San Joaquin Valley, and recycled water. The Santa Clara groundwater subbasin is in the North County, while both the Coyote and Llagas groundwater subbasins are in South County/Coyote Valley (see Groundwater Subbasins and Major Recharge Systems Map in Appendix C).

The following tables show calendar year activities for 2005 and 2006 and the plan for calendar year 2007 operations, raw water conveyance, treated water production, and groundwater recharge. Table 1-1 summarizes water use recorded and projected in the county for calendar years 2005, 2006 and 2007. Table 1-2 documents District and non-District annual water supply and distribution management activities; Table 1-3 summarizes District out-of-county water banking activities for those three years. Table 1-4 summarizes the District's water transfers. The differences between Tables 1-1 and 1-2 can be accounted for by changes in surface water and groundwater storage. Moreover, Table 1-2 summarizes only those supplies managed by the District or other agencies. The groundwater basin is also replenished by naturally occurring recharge in areas not managed by the District or others.

TABLE 1-1
Water Use for Calendar Years 2005 Through 2007 (Acre-Feet)
Santa Clara County

	Actual 2005	Estimated 2006	Projected 2007
I. WATER PRODUCTION			
District Treated Water to SCVWD-SFWD Intertie	700	3,700	2,000
In-District Groundwater Pumping	140,100	143,800	161,800
District Treated Water	133,900	131,600	134,500
District Surface Water Irrigation	2,600	3,100	3,800
Recycled Water	700	700	700
Non-District (Import, Local, & Recycled)	88,300	92,800	76,300
TOTAL WATER PRODUCTION	**366,300**	**375,700**	**379,100**
II. WATER USE			
District Municipal & Industrial	250,500	258,200	270,500
District Agricultural	27,500	24,700	33,400
Non-District (Import, Local, & Recycled)	88,300	92,800	75,200
TOTAL WATER USE	**366,300**	**375,700**	**379,100**

Recorded Operations for Calendar Year 2005

In 2005, the total water use in the county was 366,300 AF. Rainfall in the 2005 calendar year totaled 23.39 inches in downtown San Jose, about 160 percent of average. Water use in the county is categorized as either agricultural or municipal and industrial (M&I). Water use from District sources included 250,500 AF of M&I and 27,500 AF of agricultural water. Non-District use totaled 88,300 AF provided by non-District sources such as; San Francisco Public Utility Commission (SFPUC) , Stanford and San Jose Water Company reservoirs, and recycled water deliveries. Of the District water used, 140,100 AF were provided through groundwater pumping, 700 AF through recycled water produced by South County Regional Wastewater Authority (SCRWA), and 133,900 AF were delivered from our three water treatment plants. In addition, 2,600 AF were delivered from surface waters for direct use. Table 1-1 presents a detailed look at the in-county water demand.

Table 1-2, which excludes natural recharge, depicts how the water supply was managed and distributed in 2005. The District imported approximately 141,500 AF of water from State Water Project (SWP) and the federal Central Valley Project (CVP) and released approximately 140,500 AF from its reservoirs for groundwater recharge or treatment in one of our three treatment plants. The remainder of the District demand was met with natural recharge or carryover storage from our groundwater basins.

TABLE 1-2
Annual Water Supply And Distribution For Calendar Years 2005 Through 2007 (Acre-Feet)
Santa Clara County

Water Supply	Actual 2005	Estimated 2006	Projected 2007
I. ANNUAL WATER SUPPLY			
District Supply			
Imported Water To County			
SFWD Intertie	-	-	-
CVP Imports	89,100	64,200	136,300
State Water Project Imports	52,400	64,200	79,300
Total District Imports	141,500	128,400	215,600
Local Surface Water	140,500	196,000	26,200
SCRWA Recycled Water	700	700	700
Non-District Supplies			
SFPUC	59,000	58,200	55,800
Other Reservoirs and Streams (SJWC and Stanford)	16,100	20,100	7,000
Other Recycled Water	13,200	14,500	15,500
TOTAL	**371,000**	**417,900**	**320,800**
II. DISTRIBUTION OF ANNUAL WATER SUPPLY			
Distribution Within District System			
To Treated Water	133,900	131,600	134,500
To SFWD Intertie	700	3,700	2,000
To Surface Water: Irrigation via Pipeline	2,400	3,100	3,800
*To Surface Water: Environment**	43,300	89,800	800
Recycled Water to Irrigation	700	700	700
To Managed Recharge			
Santa Clara Groundwater Subbasin	69,200	74,100	71,600
Coyote & Llagas Groundwater Subbasins	32,500	22,100	29,100
Subtotal of Distribution to District System	**282,700**	**325,100**	**242,500**
Non-District Distribution			
SFPUC	59,000	58,200	55,800
San Jose Water Co. and Stanford	16,100	20,100	7,000
Other Recycled Water	13,200	14,500	15,500
Subtotal of Non-District Distribution	**88,300**	**92,800**	**78,300**
TOTAL	**371,000**	**417,900**	**320,800**

Note: The annual water supplies reported in this table include only volumes managed by the District and others that are readily estimated. CVP import supplies exclude sales and transfers to the Environmental Water Account and Westlands Water District. SWP import supplies exclude amounts banked at Semitropic Water Storage District due to the fact that these activities take place outside of Santa Clara County. In addition to the managed recharged data included in the table, county groundwater supplies are augmented by naturally occurring recharge each winter and spring. These “unmanaged” amounts are essential to county groundwater supplies and allow for the fact that the in-District groundwater pumping volumes in Table 1-1 usually exceeds the annual managed recharge. *”To Surface Water: Environment” refers to reservoir releases exceeding downstream recharge capacity.

Estimated Operations for Calendar Year 2006

In 2006, the total water use in the county was 375,700 AF. Rainfall in the 2006 calendar year was 20.80 inches in downtown San Jose, which is approximately 142 percent of average. Total water use included 258,200 AF of M&I and 24,700 AF of agricultural water. It also includes 92,800 AF provided by non-District sources (SFPUC, Stanford and San Jose Water Company reservoirs, and recycled water deliveries). Of the District water used, approximately 143,800 AF was provided through groundwater pumping, 700 AF from recycled water, 3,700 AF to the SCVWD-SFWD Intertie, and 131,600 AF was delivered from our three water treatment plants. In addition, 3,100 AF was delivered from surface waters for direct use. Table 1-1, which includes supplies available from natural recharge, presents a detailed look at the in-county water demand in 2006.

Table 1-2, presents how the water supply was managed and distributed in 2006. The District imported approximately 128,400 AF of water from the state and federal water projects. Water releases from District reservoirs totaled approximately 196,000 AF for delivery to groundwater recharge ponds, one of our three treatment plants, or for flood management and downstream environmental flows. The District managed 700 AF of SCRWA produced recycled water, excluding in-plant usage. The remainder of the District demand was met with natural recharge or carryover storage from our groundwater basins.

Projected Operations for Calendar Year 2007

The District’s annual Operations Plan describes how supplies available to Santa Clara County will be used. A preliminary plan based on conditions known in July 2007 and supply projections needed to meet dry year demands is summarized in Table 1-2. As of July 1, 2007, the 10 District reservoirs had a combined storage of approximately 95,200 AF, or about 55.5 percent of capacity, compared to 87 percent on July 1, 2006. Over the last twenty years the 10 District reservoirs averaged 98,330 AF in storage on July 1.

Imported water supplies are currently projected to be less than the District’s contractual entitlements. On May 23, 2007, the Department of Water Resources (DWR) announced that 60 percent of the SWP entitlement of 100,000 AF will be available to the District. And, on April 16, 2007, the United States Bureau of Reclamation (USBR) announced allocations of 50 percent of the 33,100 AF of CVP agricultural water, and 75 percent of the 119,400 AF of CVP M&I water. However, due to the District’s Reallocation Agreement, the District will receive up to 97,500 AF of M&I water from CVP. This results in a total supply of approximately 114,000 AF of CVP water (compared to a five-year average of 130,700 AF) and 60,000 AF of SWP water (compared to a five-year average of 83,000 AF), for a total of 174,000 AF of available imported water.

In addition to the imported water allocation, the District is also expected to receive about 38,900 AF of carryover and about 7,900 AF of other imported water in 2007. Also, the District expects to take about 10,400 AF of the supply it has previously banked in the Semitropic Water Storage District. Of the available imported water supply amount of 231,200 AF, the District plans to use 215,600 AF in county this year. The overage will be taken as carryover next year to help ensure reliability should 2008 also be a dry year. In addition to imported water, the annual water supply is made up of 26,200 AF of local water supply and 700 AF of recycled water.

The District’s 2007 Operation Plan provides projections of how District-managed water (locally conserved and imported water) will be distributed to efficiently use recharge facilities and provide treated water to meet demands. Table 1-2 shows the planned distribution of the projected supplies to Santa Clara County from District managed and non-District sources (SFPUC, recycled water and San Jose Water Company and Stanford stored surface water) of 320,800 AF for 2007.

Imported Water Operations

Water Reallocation Agreement

In 1997, the District executed a Water Reallocation Agreement with the USBR and agricultural districts in the San Luis and Delta-Mendota Water Authority that establishes the basic level of reliability for the District's CVP M&I water supplies. This 25-year agreement resolved disputes related to the USBR's M&I Water Shortage Policy that provides CVP M&I water allocations of no less than 75 percent of historic use under most shortage conditions. In addition, Westlands and San Luis water districts agreed to augment the District's supplies in certain years to bring District CVP M&I reliability up to 75 percent of contract amount. In return, the District has reallocated 100,000 AF of CVP water to the agricultural districts, and will continue to optimize water supplies for additional reallocations that may be potentially agreed upon over the term of the agreement.

Water Banking

To provide reliability in future years, the District banks water in groundwater storage outside of the county. This involves conveyance of the District's state or federal water supplies to a banking partner, another water district that operates a groundwater conjunctive use program. Storage in the bank occurs when water is physically delivered to ponds to soak into the aquifer, or when surface water deliveries are used by the banking partner in lieu of groundwater pumping ("in-lieu recharge"). Return of stored water is accomplished when the banking partner uses groundwater in place of surface supplies, or physically pumps groundwater into the surface conveyance system. The District is then delivered imported water from the Delta that would have otherwise been delivered to the banking partner or to other SWP contractors. The District primarily banks SWP water at the Semitropic Water Storage District in Kern County. Table 1-3 shows the annual changes and year-end balances for banked water during calendar years 2005 through 2006, and the projected activity in 2007.

The District is guaranteed the ability to deliver or "put" up to 31,675 AF of water to storage each year. In any given year, the District may be able to deliver more than 31,675 AF by using the unused "put" capacity of other banking partners, including Semitropic. The maximum amount of water delivered to storage in a single year was 89,022 AF in 2005. The District can withdraw or "take" up to 31,500 AF to 78,500 AF of water from storage in any given year, depending upon hydrology. The wetter the year, the greater the "take" capacity.

A net total of 57,632 AF of water was banked in 2006. The banked water was comprised of SWP surplus water and 2006 CVP contract supplies.

TABLE 1-3
District Water Banking for Calendar Years 2005 Through 2007
(Acre-Feet)

Water Banking	Actual 2005	Actual 2006	Estimated 2007
SEMITROPIC WATER STORAGE DISTRICT (SWP WATER)			
Beginning Balance (January 1)	144,457	224,577	282,209
District Deposit or Withdrawal	89,022	64,036	-18,000
Transaction Losses (e.g., Evaporation)	-8,902	-6,404	-200
TOTAL BANKED ENDING BALANCE (DECEMBER 31)	**224,577**	**282,209**	**264,009**

Water Exchanges

In recent years, the District has entered into exchanges with other agencies to maximize the efficiency of and facilitate the management of its water supplies. In 2004, the District exchanged water with San Benito Water District to improve its supply reliability. In 2005, the District engaged in a three-party exchange with the San Luis and Delta-Mendota Water Authority and Kern County Water Agency that facilitated the District’s 2005 banking activities. No exchanges were initiated in 2006.

Water Transfers

The District uses temporary or “spot market” water transfers to manage year-to-year variability in CVP and SWP supplies, and to reduce overall costs of the imported water program. In some years, the District will both buy and sell transfer water, initially buying water to offset the risk of shortage, and then selling if hydrologic conditions are wetter than expected. Additionally, some multi-year commitments may also result in off-setting transactions in the same year. In 2005 and 2006, the District purchased 2,828 AF and 643 AF of transfer water, respectively. The District currently anticipates purchasing approximately 6,000 AF under temporary agreements in 2007. In 2005, the District sold water to the CALFED Bay-Delta Program’s Environmental Water Account (EWA), whose purpose is “to provide water for the protection and recovery of fish beyond water available through existing regulatory actions...” The District also completed the sale of 10,000 AF of CVP water to federal wildlife refuges. These sales helped offset the cost of the imported water program. The District currently is not anticipating that additional water will be sold to the EWA in 2007, although option agreements are in place if adequate water supply conditions allow. Table 1-4 summarizes recent EWA transactions.

TABLE 1-4
Water Transfers for Calendar Years 2005 Through 2007
(Acre-Feet)

Transaction (In AF)	Actual 2005	Actual 2006	Estimated 2007
Purchases	2,828	643	6,000
Sale to EWA*	-8,804	0	0
Sale to Federal Wildlife Refuges	-10,000	0	0
Net Water Transfers	-15,976	643	6,000

***Note**: Source of water for sales to EWA include the District’s Semitropic storage or available imported water from CVP.

LONG-TERM WATER USE TRENDS

Recorded North County water use since FY 1964–65 and South County/Coyote Valley water use since FY 1987–88 (when the District merged with Gavilan Water Conservation District) is shown in Figures 1-1 and 1-2, respectively. Metcalf Road is the dividing line between North County Zone W-2 and South County/Coyote Valley Zone W-5 (see map of Water Utility Zones in Appendix C). South County/Coyote Valley, Zone W-5 includes Coyote Valley, Morgan Hill, San Martin and Gilroy.

Both District and non-District water use in North County, as shown in Figure 1-1, is predominantly Municipal & Industrial. Projections from the District’s 2005 Urban Water Management Plan (UWMP) indicate an increase in M&I use through 2020, when the North County annual M&I water use is projected to be 342,600 acre-feet (AF). Agricultural water use is expected to be approximately 1,000 AF per year by the year 2020 in North County, or less than 1 percent of the total North County water use.

In South County/Coyote Valley, it is anticipated that M&I water use will continue to increase while agricultural use is expected to decline (see Figure 1-2). The 2005 UWMP anticipates South County/Coyote Valley total water use to be about 61,800 AF by the year 2020. M&I and agricultural water uses are projected to be 38,800 AF and 23,000 AF that year, respectively.

The projected water usage for the county discussed above totals 405,400 AF in 2020. The projected increase of 27,800 AF, or 7 percent, over the UWMP-estimated usage in 2005 takes into account many factors, including population trends, employment growth, and the implementation of significant water conservation practices. The conservation efforts planned between now and 2020 account for approximately 53,000 AF, offsetting more than half the additional water supplies (i.e., 78,000 AF) needed to meet increased demand in 2020. Recycled water projections by producers offset demand by an additional 14,000 AF and increases in purchases anticipated by SFPUC contractors in their long-term planning assumptions account for another 11,000 AF. Overall, groundwater reserves and additional stored supplies will be enough to meet demand in dry and multiple years to about year 2020. Beyond 2020, the county would need to start dipping into groundwater reserves during years of normal precipitation, unless new supplies are secured. Any additional supplies needed beyond 2020 to meet normal year demand will also meet dry- and multiple-dry-year water demands.

FIGURE 1-1
North Santa Clara County Water Use
Zone W-2

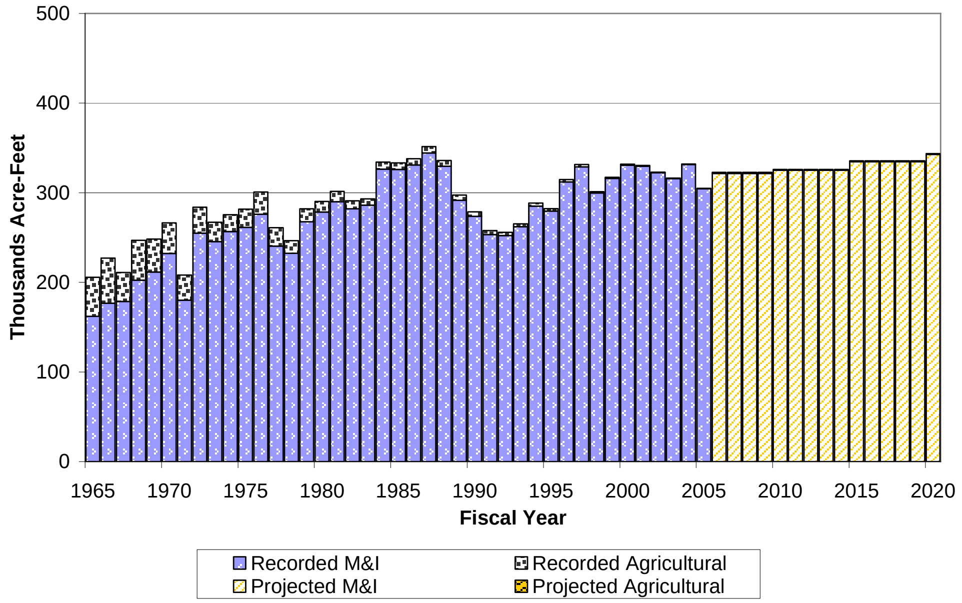
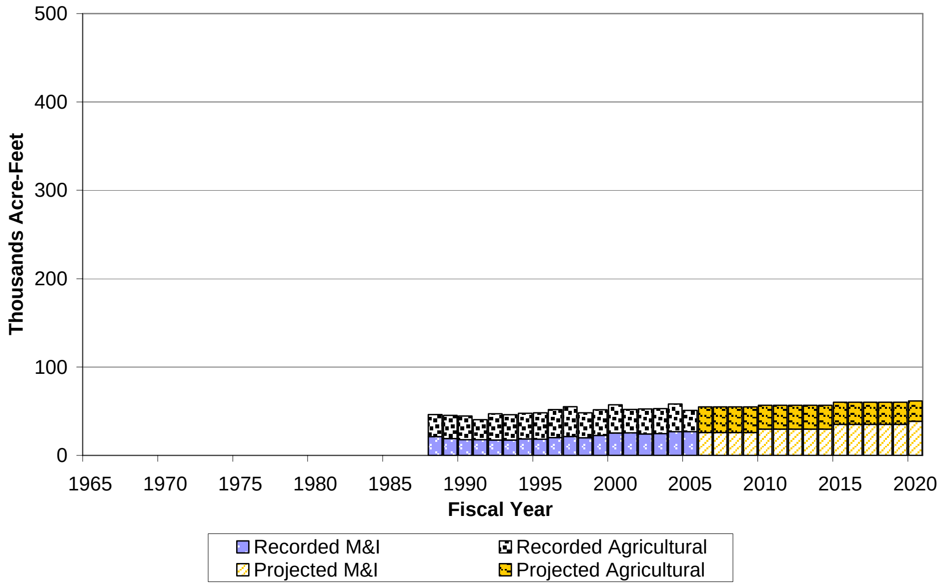


FIGURE 1-2
South Santa Clara County/Coyote Valley Water Use
Zone W-5



LONG-TERM WATER SUPPLY OUTLOOK

Sources of water supply in North County consist of locally developed water, recycled water, and water imported via the SWP, the federal CVP, and the City and County of San Francisco's Bay Division Pipelines (Hetch Hetchy). South County/Coyote Valley is supplied by locally developed water, recycled water, and CVP water imported via the San Felipe Division. The recorded water supply taken in North County since FY 1964–65 is shown in Figure 1-3, and South County/Coyote Valley since FY 1987–88 is shown in Figure 1-4. Projected supplies of local, recycled and imported water are shown to the year 2020. Projected supply availability figures are based on supplies needed to meet a normal year demand as presented in the District's 2005 Urban Water Management Plan (UWMP 2005). According to the UWMP 2005, a normal year is defined as a year in the historical sequence that most closely represents median runoff levels and patterns. No single year's hydrology is equivalent to the average for all sources; however, 1985 was a near-average year for both local rainfall and imported water and is the year determined to be most representative of normal year supply.

In working toward ensuring a reliable future water supply, the District is engaged in several activities. Within the county, the District continues its conjunctive use program of recharging surface water to augment groundwater supplies. Additionally, the District is providing financial incentives to wastewater agencies for delivery of recycled water for non-potable uses and has signed a partnership agreement with the City of San Jose to explore the future development of recycled water. Local supplies will continue to be supplemented in the future with non-potable water from recycled water facilities in San Jose, Sunnyvale, and SCRWA serving Gilroy and Morgan Hill.

The District, along with numerous other urban water agencies, is participating in the statewide Water Conservation Memorandum of Understanding to implement 16 urban water use best management practices (BMP). In addition, the District manages urban water use conservation programs beyond the BMPs and is implementing agriculture water conservation practices as required under the CVP Improvement Act (CVPIA). These activities are more fully described in Section 2, Benefits and Services Provided by the District.

FIGURE 1-3
North Santa Clara County Water Supply
Zone W-2

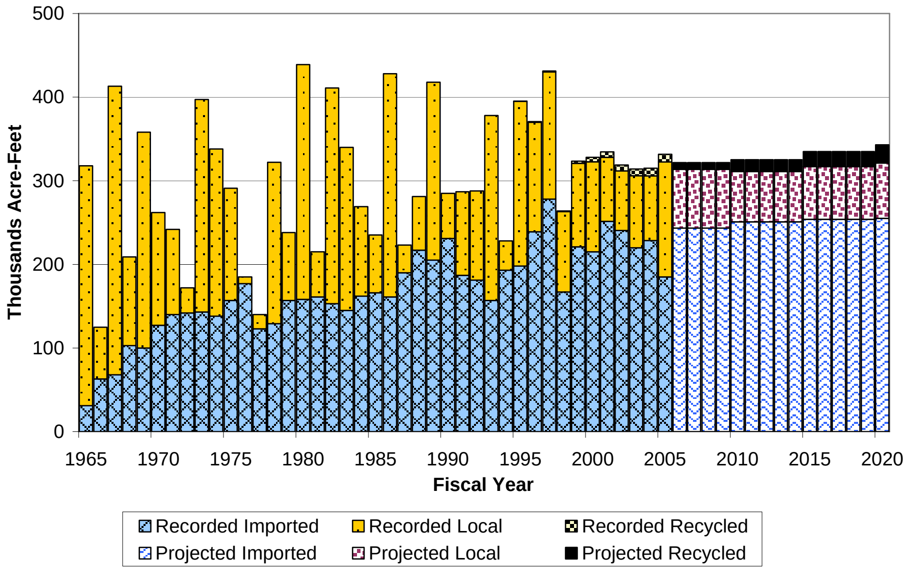
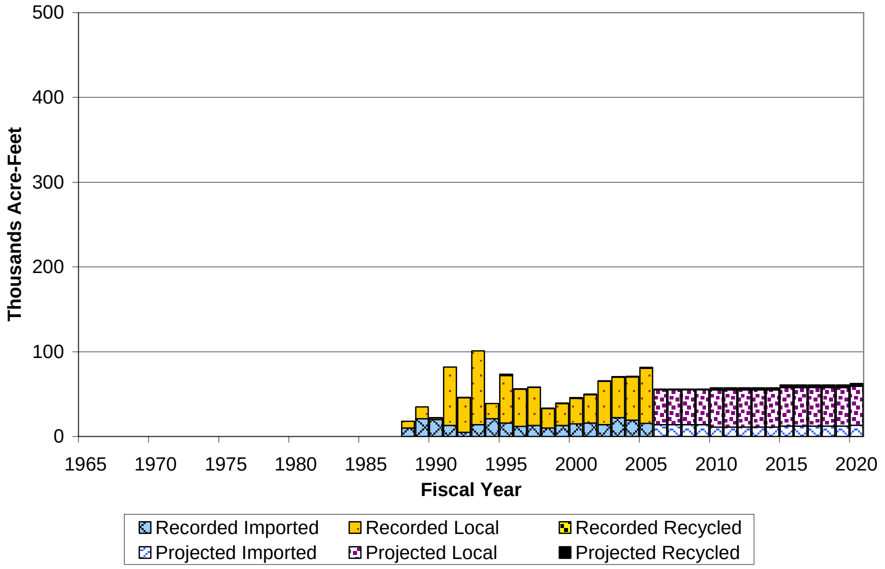


FIGURE 1-4
South Santa Clara County/Coyote Valley Water Supply
Zone W-5



Note: North County and South County/Coyote Valley projected supplies, illustrated in the figures above, represent supplies needed to meet a *normal* year demand as presented in the District's 2005 Urban Water Management Plan (UWMP 2005). Please refer to the UWMP 2005 for supplies necessary for dry and multiple dry years. The strategy is to maximize use of imported and recycled water supplies to meet demand and then take from local surface supplies and groundwater. Incremental increases seen in projected imported water supplies are due to SFPUC projections. Recorded supply figures reflect the amounts of supply *taken*. Supplies *taken* are often less than the supplies *available* due to system capacity limitations and weather. Supplies that are not taken in a single year are carried over, banked out of county, exchanged, or sold.

2. BENEFITS AND SERVICES PROVIDED BY THE DISTRICT

Section 26.5 of the District Act specifies that this annual report provide details on the District's "...activities in the protection and augmentation of the water supplies of the district." Protecting available resources and planning for and augmenting future supplies requires that the District levy charges on the production of groundwater and enter into financial contracts for the delivery of treated surface water. The importation of water and management of local water supplies require that the District undertake a wide range of supporting functions.

The description of District activities has been organized by the Board's Ends Policies, which instruct the General Manager (GM) to achieve certain results for certain recipients at a specified cost. These policies and related costs are reflected in the programs and projects budgeted in the Water Utility Enterprise Fund. Ends Policy E-1 embodies the District's overarching mission to provide "a healthy, safe, and enhanced quality of living in Santa Clara County through watershed stewardship and comprehensive management of water resources in a practical, cost-effective, and environmentally sensitive manner." All of the subsequent Ends policies are described at a general level and also at more defined levels. They were adopted to direct the GM as to their intended results, organizational products, impacts, benefits, outcomes, recipients, and relative worth.

This section describes the Board's Ends Policies as well as benefits and services that the District's Water Utility Enterprise provides to carry them out. These benefits and services are presented under the general headings of:

- Ends Policy E-2 (Healthy & Safe Environment)
- Ends Policy E-3 (Enhanced Quality of Life)
- Ends Policy E-4 (Positive District Image)
- Capital Improvements (Infrastructure to Support all Ends Policies)

ENDS POLICY E-2

Ends Policy E-2 states, *"There is a healthy and safe environment for residents and visitors."* This policy strives to accomplish two goals. The first goal is to provide a reliable supply of healthy, clean drinking water. The second goal is to provide reduced potential for flood damages. The Water Utility Enterprise is responsible in whole or in part for the first goal. The programs that endeavor to achieve this goal and the specific ends policy(ies) that they are designed to fulfill are as follows:

Water Quality Protection

The District is responsible for protecting surface and groundwater resources for use in the county. Water quality programs include: (1) treating local and imported surface water for sale to retailers, (2) protecting local surface and groundwater resources from contamination, and (3) monitoring imported surface water from the Sacramento–San Joaquin Delta for contamination, and participating in efforts with the state Department of Water Resources and other agencies to protect the Delta from contaminating sources. Water treatment of local and imported surface water is necessary to ensure that the water the District provides meets or exceeds all federal and state drinking water standards. *(Ends Policy 2.1.1)*

Treated Water Operations

The District owns and operates three water treatment plants: Santa Teresa Water Treatment Plant (STWTP), Rinconada Water Treatment Plant (RWTP), and Penitencia Water Treatment Plant (PWTP), which provide high-quality treated water to the residences and businesses in Santa Clara County. The treatment plants utilize conventional treatment processes of flocculation, sedimentation, filtration, and disinfection to provide high-quality water. The treatment plants are in the process of adding advanced treatment technologies, including ozone as the primary disinfectant, in order to continue ensuring high-quality drinking water that meets drinking water standards. Ozone is being added in order to lower potentially harmful disinfection by-products well below federal regulatory levels, to improve the taste of our drinking water especially during episodes of foul tastes and odors that could result from algae production in the Sacramento-San Joaquin Delta, and to provide an additional treatment barrier against emerging contaminants that may develop in our source waters in the future. The STWTP recently brought their ozone systems on-line in February 2006 and PWTP brought its ozone on-line in July 2006. Both treatment plants have since seen reductions in their disinfection by-products and improvement in the taste and odor of the drinking water leaving the plants. Construction of ozone systems at RWTP are planned and are currently under review.

In a “Green Business” effort to use more environmentally friendly chemicals, the District’s water treatment plants switched the corrosion inhibitor they use, from a zinc orthophosphate to a non-zinc orthophosphate product, phosphoric acid. Corrosion inhibitors are added to the water leaving the District’s water treatment plants in order to reduce corrosion in the distribution system and customers’ piping. Keeping corrosion in control ensures lead and copper levels in customers’ tap water comply with the Federal Lead and Copper Rule. The move to the non-zinc product has the “Green Business” benefit of reducing zinc loading to the local wastewater treatment plants, and ultimately the amount of zinc discharged into the San Francisco Bay.

Reflecting its commitment to provide the highest quality water possible, the District was among the first water utilities nationwide to join the Partnership for Safe Water in 1995 (Partnership). The Partnership is a voluntary program developed cooperatively by the United States Environmental Protection Agency, the American Water Works Association, the Association of State Drinking Water Administrators, and several other national drinking water industry organizations. The purpose of the program is to further reduce the potential risks to consumers from microbial contaminants such as cryptosporidium and giardia. The District has consistently surpassed the Partnership’s goal for filtered water turbidity, a critical indicator of plant performance. *(Ends Policy 2.1.1)*

Hydrologic Data Management

The District supports numerous data collection and analysis efforts covering rainfall, stream flows, reservoir storage, water use, groundwater levels, and other information that is essential to planning and operating our water distribution and delivery system. *(Ends Policy 2.1)*

Surface Water Transportation and Storage

Water supply reliability includes the availability of the water itself as well as the reliability and integrity of the infrastructure and systems that transport and store it. Thus, all activities related to operating and maintaining the District’s dams, reservoirs, canals, and pipelines are directly related to providing water supply.

District facilities are subject to regulation regarding seismic performance of dams, reservoir landslide monitoring and evaluation, and periodic field inspections. Consequently, maintenance activities include continuing liaison and data exchange with the California Division of Safety of Dams and the Federal Energy Regulatory Commission with regard to the safety of District dams. *(Ends Policy 2.1.2)*

Imported Water

The SWP, CVP, and City and County of San Francisco's Regional Water System provide approximately 60 percent of water supplies in average years to the county. Imported water is conveyed to the county through the South Bay Aqueduct, which carries water from the State Water Project; the federal San Felipe Division's Santa Clara Conduit, which brings water from the CVP; and the SFPUC Aqueduct, which brings water from the Hetch Hetchy Reservoir in the Sierra Nevada Mountains.

Management of the imported water program includes protecting the District's assets (CVP, SWP, and other contract rights); meeting current year operational needs for imported supplies; developing water transfers, exchanges and banking agreements to support the Integrated Water Resources Plan; and controlling costs. Annual imported water purchase costs are approximately $40 million, a significant portion of the Water Utility budget. Controlling these costs involves close monitoring of appropriate state and federal budgets, cost allocations, and charges for the CVP and SWP, and related CALFED programs. Financial issues frequently arise that must be resolved through negotiation among contractors and the project agencies, administrative procedures, and sometimes legislation or litigation. In addition, if there is no conflict with water reliability goals, the District offsets costs by using imported water assets to generate revenue. The District has sold wet-year water and provided temporary storage options to the Environmental Water Account (EWA) in recent years to offset the costs of purchasing water.

Maintaining reliable access to high-quality supplies of imported water is essential to meeting current water needs and to implementing the District's IWRP strategy for future water supplies. Both Board and staff members devote considerable time in three areas: Resolution of Bay-Delta issues through the CALFED process, water banking, and managing CVP and SWP contract issues. Each of these is discussed below. *(Ends policies 2.1.2, 2.1.3 and 2.1.4)*

Resolution of Bay-Delta Issues: (CALFED Bay-Delta Program)

The District imports water through the San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (Bay-Delta) under contracts with the SWP and the federal CVP. The Bay-Delta is the largest estuary on the west coast and supports more than 750 species of plants and wildlife. The Bay-Delta also conveys water supply to more than two-thirds of the population in the state and to agriculture in the Central Valley and the San Felipe Division. However, decades of competing demands have taken a toll on the Bay-Delta and today it no longer functions as a healthy ecosystem or as a reliable source of water. Regulatory actions to protect threatened or endangered fish have reduced the reliability of conveyance of water supplies through the Bay-Delta. Water quality is degraded by tidal inflows of saltwater, agricultural and urban runoff, and natural organic peat soils, making it difficult and expensive to meet drinking water standards. In addition, the vulnerability of Delta levees to seismic and flooding failures threatens both the infrastructure and the quality of California's water supply.

The District is a leader in garnering broad support for the CALFED Bay-Delta Program. Staff actively participates in the Bay-Delta process and the Bay-Delta public advisory committees. A successful Bay-Delta resolution is absolutely essential to address California's water problems and to maintain the public welfare and the economic viability of the state.

In addition, the District supports restoration of the Bay-Delta ecosystem through payments to a restoration fund that is mandated by the 1992 Central Valley Project Improvement Act (CVPIA). Depending on the amount of CVP water taken, the District contributes approximately $2 million annually to this fund.

In 2005, the governor proposed development of a ten-year action plan for the CALFED program. The plan involves four key activities: refocusing on the highest priority Delta issues; installing a new governance structure; improving program and fiscal management; and implementing a near-term funding strategy. In November 2005, the governor's Little Hoover Commission issued its findings of CALFED governance, concluding, "One lesson from the CALFED experiment is that process and structure cannot substitute for leadership or authority." The report contained specific recommendations to separate and clarify the roles of management, public involvement and legislative oversight. State and federal agencies and water users are currently developing regulatory commitments and additional water user contributions for the preparation of the Bay Delta Conservation Plan (BDCP), a Species Recovery Capital Fund, a long-term "Delta Vision" process, and Pelagic Organism Decline studies. In 2006, agreements were completed to document commitments of the agencies and water users. The District's share of costs related to these efforts is approximately $530,000 over the next several years.

In addition, CALFED continues to move forward with a package of Delta infrastructure improvements to improve Delta water quality and increase Delta water supplies, improve conditions for fish, and protect in-Delta water users. Potential benefits of the package to the District include: more reliable CVP and SWP supplies; near-term protections against the San Luis Reservoir low point; improved Delta water quality, and an extension of the EWA. The allocation of costs to beneficiaries is the subject of ongoing negotiations among stakeholders, agencies, and legislators. However, some portion of the cost of Delta improvements is expected to be allocated to the District. These costs currently are not included in groundwater charge projections. *(Ends policy 2.1.3)*

Banking Available Supplies for Future Use

The District's 2003 IWRP study identified banking of excess supplies in wet years as a central element in the preferred strategy for providing supplies needed in future dry years.

In May 1996, the Board took the first step in implementing the banking strategy when it approved an agreement with Semitropic Water Storage District to store 45,000 AF of State Water Project water. In 1997, the Board approved a long-term agreement with Semitropic. Under the terms of this agreement, the total banking capacity available to the District until January 1, 2006 was 350,000 AF. By that date, the District had to decide its permanent level of investment in Semitropic, and make any capital payment necessary to reach that level. On December 6, 2005, the Board approved moving forward with the remaining investment to secure 350,000 AF of storage capacity in the Semitropic Groundwater Banking Program. Staff completed the required contract amendment and made all necessary capital payments by January 1, 2006.

Through the Semitropic Groundwater Banking Program, the District has banked water in years 1997 through 2006. The District now has approximately 282,000 AF in storage (see Table 1-3) which the District can use during times of hydrologic or regulatory shortage. In the event of a major disruption in the Delta or failure of the Delta pumping plants, however, delivery of water from Semitropic to the District would be significantly affected along with other imported water deliveries from the District's SWP and CVP contracts. To the extent that Kern County Water Agency has state water stored in San Luis Reservoir that is not needed in Kern County, deliveries from Semitropic could be accomplished through the San Felipe Division. *(Ends policies 2.1.3 and 2.1.4)*

Managing Central Valley Project and State Water Project Contract Issues

The District's agreement with the U.S. Bureau of Reclamation (USBR) provides for eventual payment of the major share of USBR's costs for constructing the San Felipe Division of the CVP. The District's 1977 contract established a fixed rate for repayment of San Felipe Division facilities during the first 20 years of water deliveries (1987 through 2006) in recognition of the District's need to expand its local infrastructure to accept CVP water. The fixed rate provided for partial repayment of annual capital interest expense, and the cumulative shortfall (unpaid capital interest) was being tracked by the USBR as an alleged "operation and maintenance deficit," subject to much higher interest rates than the San Felipe Division capital rate. The District contested the USBR's treatment of these costs, and a settlement was achieved in March 2005. The settlement reduced the District's annual costs for CVP water by approximately $5 million per year.

Pursuant to the CVPIA, in 1997 the District signed an agreement to negotiate the early renewal of its CVP contract. After nearly a decade of complex CVP-wide, regional, division and district-level negotiations, the District's long-term renewal contract was substantially ready for approval in 2006. However, in March 2006, USBR decided to suspend all long-term renewals pending completion of certain revisions of supporting environmental documentation. The District and USBR had negotiated a revised repayment contract for San Felipe Division facilities to improve financial certainty for both parties and to resolve outstanding cost issues with San Benito County Water District. In order to move forward with the repayment contract, as well as implement financial and administrative provisions of CVPIA (conservation reporting and tiered pricing), the USBR agreed to amend the District's existing CVP contact. On January 9, 2007, the District approved the first Amendment of its CVP contract. The amended CVP contract reduces the District's share of San Felipe Division capital obligation by about $35 million, or in terms of annual costs, by about $3 million per year. Long-term CVP contract renewal negotiations are expected to resume in 2008.

As shown in Figure 2-1, the District's capital obligation for San Felipe Division facilities generally increased during the first 20 years of water deliveries due to fixed rate payments that did not cover all capital interest expenses. Just as originally negotiated, these minimum CVP contract payments provided cash flow benefits to the District to finance other water utility improvements. From time to time, the District also made supplemental CVP payments. In FY 2005, the District accrued a supplemental payment after major financial issues were settled with USBR. The District accrued another supplemental payment in FY 2006. During these first 20 years, the District successfully reduced its San Felipe Division capital obligation by nearly $90 million through various appeals of USBR financial policies, settlement of the "operation and maintenance deficit," and most recently, amendment of the San Felipe Division cost allocation and repayment terms. Approximately $396 million in total San Felipe Division capital costs remain to be repaid, including unpaid capital interest, and federal law requires all of these costs to be fully repaid by 2036. The District's share of these remaining San Felipe division capital costs is approximately $305 million. Therefore, beginning in 2007 the District's annual CVP contract payments will increase substantially (see Figure 2-2). The new contract payment schedule established by the 2007 CVP contract amendment repays all outstanding San Felipe Division capital costs, including unpaid capital interest, and eliminates the need for any future supplemental payments that the District otherwise would have had to make.

FIGURE 2-1
District's San Felipe Division Capital Obligation

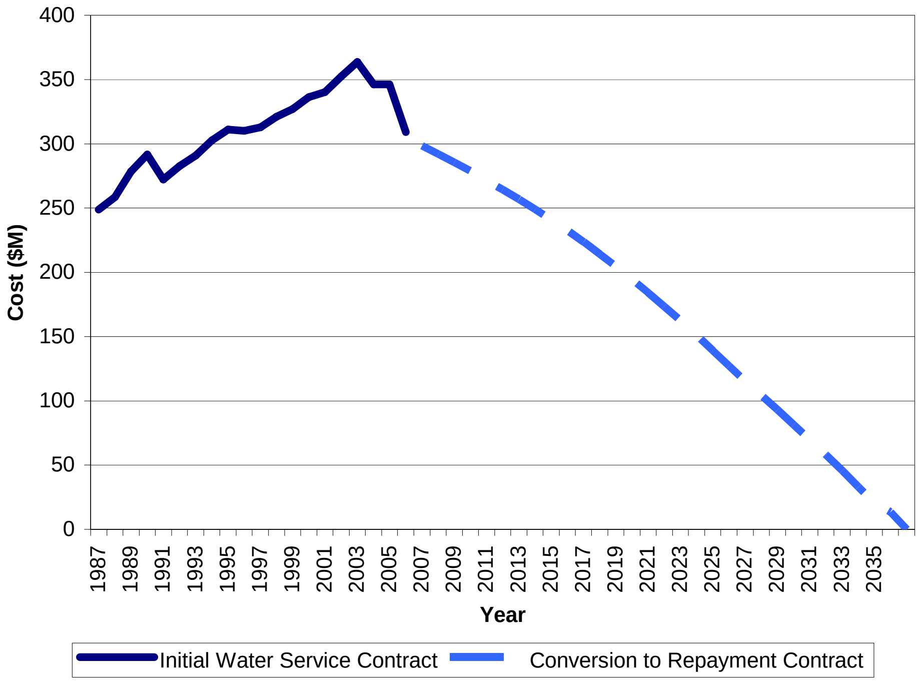
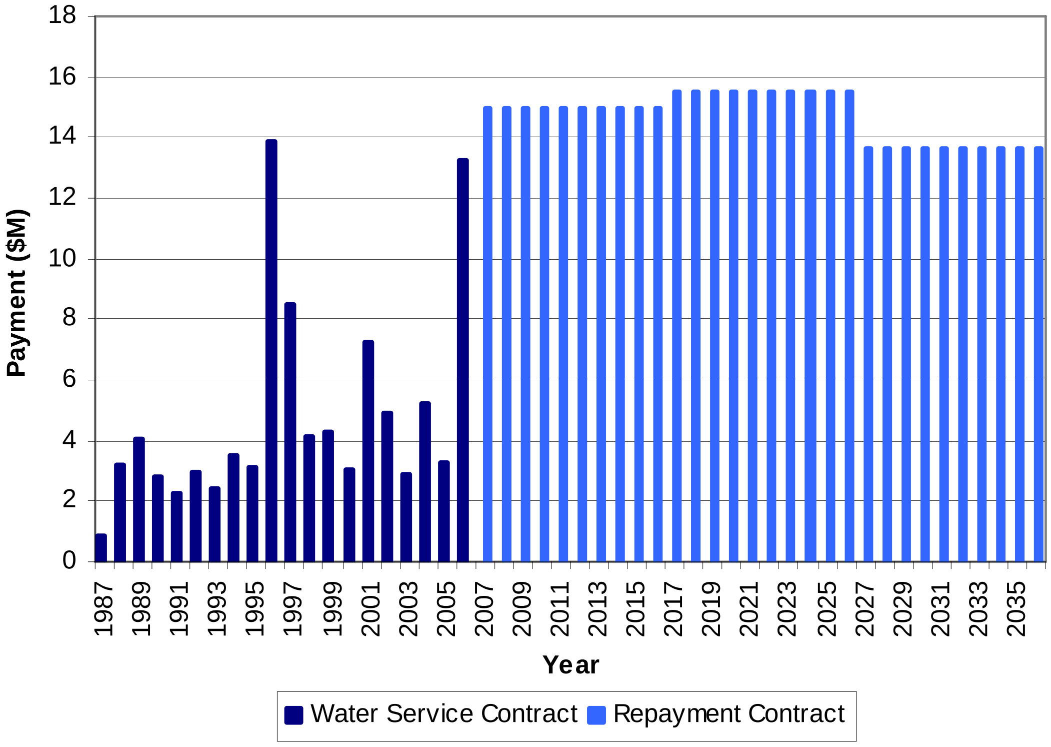


FIGURE 2-2
San Felipe Division Annual Payments



The District's contract with DWR for supplies from the SWP has also been amended to address a wide range of water supply and financial issues (the "Monterey Amendment"). While some provisions of the amendment reduce the reliability of the District's SWP supplies, these are offset by others that allow more efficient, cost-effective management of SWP water through transfers and banking. A settlement over litigation regarding the Monterey Amendment was approved by Sacramento Superior Court on May 20, 2003. *(Ends policies 2.1.2, 2.1.3 and 2.1.4)*

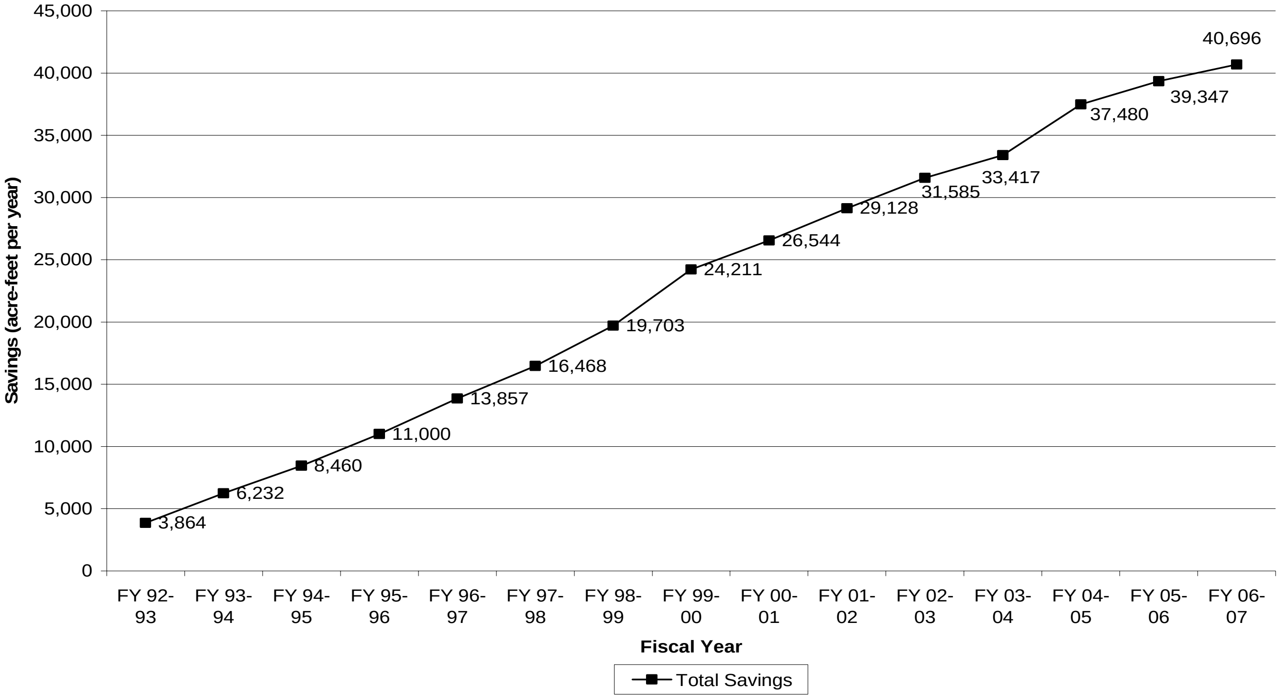
Water Use Efficiency: Water Conservation

The District's Water Conservation Program is essential to improving water supply reliability because the water savings achieved from implementing conservation will reduce current and future water demand. This is critical in that it will not only assist in meeting long-term reliability goals, but it will also assist in meeting short-term demands placed on the water supply system during critically dry years. As a signatory to the California Urban Water Conservation Council's Memorandum of Understanding (adopted by our Board in 1991), the District is committed to implementing a number of Best Management Practices (BMPs) for urban water conservation. The CVPIA also requires implementation of various BMPs related to agriculture.

The Water Conservation Program's goal, as identified in the 2005 Urban Water Management Plan (UWMP), is to reduce yearly baseline water demands by a total of 98,000 AF by the year 2030. To date, the District has reduced the yearly baseline water demand by 40,700 AF. As stated in the UWMP (p.134), "[The] conservation efforts planned between now and 2030 will offset about half the additional water supplies needed to meet increased demand."*(Ends policy 2.1.8)*

Figure 2-3, shown below illustrates the progress that the District is making to reach this goal.

FIGURE 2-3
Annual Water Savings From Conservation Programs



Between 1990 and June 2007, the District accomplished the following:

Residential Programs	Totals
Residential Ultra-Low-Flush Toilets (1.6 gallons per flush) installed	243,144
Residential high-efficiency (1.2 gallon per flush) toilet (HET) rebates	636
Residential water-efficient washing machine rebates	68,188
Low-flow showerheads distributed	132,000
Faucet aerators distributed	97,400
Water-Wise House Calls (residential surveys) completed	23,106
Commercial Programs	**Totals**
Commercial ultra-low-flush toilets installed	9,522
Commercial water-efficient washing machine rebates	2,715
Water-efficient pre-rinse sprayers installed in restaurants	3,883
Commercial high-efficiency toilets (HETs) installed	5,007
Commercial high-efficiency urinal valves retrofitted	78
Landscape Programs	**Totals**
Irrigation surveys for large landscapes completed	872
Weather-based or Evapotranspiration (ET) Irrigation Controllers installed	429

Of the aforementioned accomplishments, residential and business Ultra Low Flush Toilets (ULFTs) and HETs contributed to over 54 percent of the annual water savings. Faucet aerators and showerheads respectively contributed 14 percent and 9 percent of the savings. Water efficient washing machines contributed 2.7 percent of countywide annual water savings. Other programs, such as the large landscape audits, Water Wise House Calls and business improvements (excluding the ULFTs) collectively account for 20 percent of the annual water savings.

Program Highlights:

Residential and Commercial Water-Efficient Clothes Washer Rebate Program: In FY 2006–07, the District, in conjunction with other Bay Area water agencies continued to offer a rebate for residential and commercial water-efficient washing machines. This is a DWR grant-funded program. Due to this additional funding the District is able to increase its rebate amount to $100-$150, depending on the efficiency of the machine. As a result, there has been an increase in the number of rebates issued for the most efficient machines, thereby maximizing water savings. The District also offers a commercial High-Efficiency Clothes Washer Rebate Program. The current rebate amount per machine is $400 and over 2,700 rebates have been issued since the program commenced.

Residential High-Efficiency Toilets: In FY 2003–04, the District launched the High-Efficiency Toilet Rebate (HET) Program. This program provides a financial incentive of $125 for single-family homes and multi-family complexes for the purchase of toilets which flush 1.28 gallons or less. HETs are an emerging technology which has a great potential for water savings. Single family residences can replace up to three non-ultra low flush toilets (toilets which use more than 1.6 gallons per flush) while multi-family complexes are only limited by the number of non-ULFTs they currently have.

Commercial Retrofits: Two DWR grant-funded programs were launched in 2004: the High-Efficiency Toilet (HET) Installation Program, a full-installation program placing 1.0 gallons-per-flush toilets in commercial establishments, and the High-Efficiency Medical Equipment Rebate Program, offering rebates for water-efficient x-ray fill processors and water-efficient dental vacuums. For the Commercial HET Program, over 5,000 toilets were installed in commercial establishments and multi-family complexes through June 2007. Additionally, 78 high-efficiency urinal valves were replaced through this program. Through the High-Efficiency

Medical Equipment Rebate Program, four water-efficient x-ray film processor rebates, at $3,000 each, were distributed to a local hospital.

Pre-Rinse Spray Valve Installation Program: For three years, the District has participated in the statewide, CPUC-grant funded Pre-Rinse Spray Valve Installation Program, also known as “Rinse & Save.” Since the start of the program in FY 2002–03, nearly 4,000 high-efficiency spray valves have been installed in restaurants and commercial kitchen facilities in Santa Clara County, helping to save water and energy (since the sprayers reduce hot water use). The District is also participating in another Pre-Rinse Spray Valve Installation Program, this one funded by a grant from the California Public Utilities Commission.

Water Efficient Technologies: The District co-funds the WET (Water Efficient Technologies) Program, along with the City of San Jose. This program offers rebates to commercial and industrial water customers throughout the tributary area of the San Jose/Santa Clara Water Pollution Control Plant for the implementation of process and equipment changes that reduce water needs and wastewater discharges. In 2001, the District expanded the WET Program to cover all of Santa Clara County (i.e., non-tributary areas of the county) and covers the full cost of the WET projects outside of the tributary area. Through FY 2006-07, 69 sites have received $1,513,474 $779,413 is the District’s portion) in financial incentives, resulting in 5,834 acre-feet in savings.

Commercial Water Survey Program: The Water Use Survey Program, which resumed in FY 2004–05 and continued into FY 2006–07, provides free water use surveys to commercial, industrial, and institutional establishments. Water-saving measures are evaluated and adopted in the resulting water use survey reports. The goal of the program was to conduct a total of 45 water use surveys and all 45 surveys have been conducted as of June 2007. A final report, detailing the water savings and recommendations was completed in July 2007.

Web-based Irrigation Budgets: In late FY 2001–02, the District started a program that will calculate water budgets for large landscape sites and land area for different crops. The District, utilizing multi-spectral images and different classification methods has calculated the square footage of irrigated landscape for approximately 50,000 irrigation-only and mixed-use commercial accounts that are distributed over a 900 square-mile area. We are now in the process of entering this data into a web-based database which will then calculate a site specific water-use budget. The database (which will be accessible to property owners, managers, landscapers and water agencies) will include both a table and graph comparing a recommended amount versus what the site is actually using. The District was awarded $406,000 in CALFED grant funding from the California DWR to help fund this project.

Weather-Based or Evapotranspiration (ET) Controllers: The Evapotranspiration (ET) Controller Pilot Program for both residential and commercial properties has now been completed. The target participants were the top 20 percent of residential/small commercial water consumers and will be used to determine the amount of outdoor water savings that can occur with the use of ET Controller technology. The program began in June 2003 and resulted in the installation of 175 residential and small commercial ET controllers.

The District also applied for and was awarded Proposition 13 grant funding in conjunction with six other Northern California water agencies and several Southern California water agencies including the Metropolitan Water District of Southern California. The grant will fund the installation of approximately 650 controllers over three years, with 75 percent targeted to be installed in locations with over one acre of irrigated landscaping. Since the Weather-Based Irrigation Controller Installation program’s launch in December 2005, 249 grant-funded weather-based irrigation controllers have been installed on landscapes throughout the service area.

Garden Soft Software: The District coordinated with Garden Soft Software to develop the residential Water-Wise Gardening for Santa Clara County CD-ROM. This interactive CD-ROM showcases over 1,000 native, drought-tolerant and water efficient plants and features the District’s landscape design brochure “Rules of

Thumb for Water-Wise Gardening." This software will be used to promote water efficient plant selection and garden design at District workshops and selected events.

Water-Wise Demonstration Garden: The District is also undertaking a Water Wise Demonstration Garden Project. Currently in the design phase, the goal of the demonstration garden is to develop a unique, demonstration garden that promotes water use efficiency in landscaping. The garden will be an educational resource, test facility, and learning center providing environmentally sound and cost-effective landscaping alternatives. The primary purpose of the garden is to educate the general public on the use of water wise plants while promoting efficient irrigation technologies and recycled water.

Mobile Lab: The District is in the tenth year of a Mobile Lab Program, which provides county farmers with on-site irrigation system evaluations and recommendations for efficiency improvements. The District's Agricultural Water Use Efficiency program and Nitrate Management programs worked closely together and offered financial incentives to encourage water use efficiency. The in-field Nutrient Assessment Assistance Program (INAAP) matched fertilizer use to crop needs. As of July 2007, 422 sites, representing 109 growers, have received Mobile Lab field tests bringing the total identified potential savings to 7,488 AF.

Some changes in Mobile Lab eligibility were made in 2003. The first was the addition of an irrigation system evaluation requirement in order to link the discount more closely to the District's goal of water use efficiency. The second was a limitation of the duration of qualification to three years, after which the grower would have to obtain a new irrigation system evaluation to maintain eligibility for the discount. The three year time limit was imposed because, over time, the efficiency of an irrigation system will degrade in the absence of a maintenance program. This effort is currently under review and the program will be changed based on our negotiation and cooperation with the Santa Clara County Farm Bureau.

The Water Use Efficiency Unit works with various committees and organizations, such as the Board's Landscape Advisory Committee, California Native Plant Society, Master Gardeners of Santa Clara County, and the Santa Clara County Farm Bureau to develop water conservation programs.

Managing Groundwater Recharge

The District operates ten reservoirs that conserve water for later recharge into the groundwater subbasins or treatment at one of the District's three water treatment plants. The three interconnected subbasins (see Groundwater Subbasins and Major Recharge Systems map, Appendix C) have approximately 530,000 AF of potential operational water storage and normally provide about half of the county's annual water supply.

Groundwater basins are naturally replenished by rainfall, water percolating through the beds of streams, and other sources. As natural recharge is not sufficient to replenish the amount of groundwater withdrawn annually, the District conducts an active managed recharge program. Groundwater recharge is critical for ensuring a reliable water supply, storing water for use during droughts and shortages, and preventing land subsidence, which is very costly to the community. The District's managed recharge program replenishes groundwater storage through more than 300 acres of off-stream ponds and 30 creeks. In addition to local water, these facilities also percolate imported water into the aquifer. The annual average recharge capacity of these systems is approximately 138,000 AF.

The Santa Clara Subbasin underlies the northerly portion of the Santa Clara County and includes the majority of the streams and recharge facilities operated by the District. In 2006, it is estimated that the District replenished this subbasin with approximately 74,100 AF of locally-conserved and imported water. The Coyote and Llagas subbasins in the southerly portion of the county were replenished with approximately 22,100 AF of locally-conserved and imported water. *(Ends policies 2.1.2, 2.1.3, 2.1.5)*

Water Supply Sustainability and Long-Term Planning

Water, more than any other resource, plays a significant and vital role in the everyday actions of any society. As the water management agency and principal water wholesaler for Santa Clara County, the District is responsible for planning for the long-term water supply of the county. The development of public water systems is a primary requirement for an adequately functioning and sustainable society. A safe and reliable water supply extends beyond the significant social requirements of basic health and sanitation. This extension includes economic vitality, environmental needs, agricultural requirements, social benefit, cultural expectations and requirements, and quality of life enhancements. Meeting the water supply needs of the county is a significant challenge due to periodic droughts and increasing competition for water supplies from other urban, agricultural and environmental water users throughout the state. In addition, externalities such as climate change, and global resource and economic constraints further challenge the sustainability of our water supply systems. The Water Utility Enterprise (WUE) defines sustainability as “meeting the needs of the present, without compromising the ability of future generations to meet their own needs.”

The District’s long-term water supply planning combines sustainability principles with water resources planning and watershed stewardship planning. This robust, integrated approach provides reliable and resilient water supply and a sustainable system designed to meet the diverse water resource needs of communities across the county.

For over a decade the District has used an Integrated Water Resources Planning (IWRP) process to make sound long-term water supply investment decisions. The IWRP process approaches water supply issues broadly and inclusively, incorporating community involvement and flexibility to respond to changing and uncertain future conditions. The District’s first IWRP document was finalized in 1997 (IWRP 1997). An updated study, performed in 2003 (IWRP 2003), provided a planning framework for future water supply investment options to meet the Board’s Ends policies. IWRP 2003 was designed to be an on-going process and to provide an incremental and flexible implementation strategy in order to be able to plan for and react to the many challenges of the future. The main challenges that IWRP 2003 addressed include: dry year supply shortages, drinking water quality concerns related to both surface water and groundwater, population growth statewide and in the county, environmental water needs and fisheries protection measures that impact the reliability of imported and local water supplies, infrastructure failure risks, unanticipated changes in water demand due to land use changes, and long-term climate changes that impact availability of water supplies and controlling costs.

The IWRP 2003 study’s principal recommendation was to safeguard and maintain existing water supplies, infrastructure, and programs to ensure their long-term viability. The protection of the baseline is vital to ensuring reliability. IWRP 2003 also recommends a number of near-term actions to be implemented between now and 2010, as well as strategies to keep longer-term options open.

The District completed its Urban Water Management Plan (UWMP) in December 2005, pursuant to California Water Code Sections 10610 through 10657 (the Urban Water Management Planning Act). The Act requires urban water suppliers such as the District to review update and adopt an UWMP at least every five years. The District’s UWMP 2005 was prepared in coordination with water retailers (who also must prepare their own UWMPs), the county, and local cities and towns. As part of this work, the District performed demand studies using the growth projected in the cities and county general plans; population growth projections from the state and the regional ABAG; and water demands projected by major water retailers. Completion of the UWMP allows the District to remain eligible for state water bank assistance and for state funding managed by the California Department of Water Resources.

A key tenet of the District’s approach to sustainability and a reliable water supply is the maintenance and protection of existing water supplies, infrastructure, and programs (referred to as the “baseline” in the IWRP).

The District undertook an evaluation of existing water supplies, infrastructure and programs to understand their condition and identify what is needed to safeguard and enhance these critical supplies, programs or infrastructure. The District has also developed a systematic approach to Water Utility Enterprise investment decision making building on the IWRP investment decision-making tools. The District's Asset Management Programs, Capital Improvement Program, master planning, and strategic planning support this decision-making framework.

In addition to investing in existing and future water supplies and infrastructure, the District must continue to develop and promote partnerships to ensure sustainability. The District works with the County of Santa Clara, cities, water retailers, industry stakeholders, a variety of community groups, the California Climate Action Registry, Sustainable Silicon Valley, the SFPUC, the Bay Area Water Supply and Conservation Agency (BAWSCA), and neighboring local and regional water management agencies.

Integrated Regional Water Management Planning

The District has been at the forefront in supporting and promoting integrated regional water management planning, as demonstrated by its leadership in completing two Integrated Regional Water Management Plans (IRWMP) – one for the nine-county San Francisco Bay Area region and another for the Pajaro River Watershed region. The District's leadership role dated back to 2002 with the GM establishing the Bay Area Water Agencies Coalition (BAWAC) to coordinate water planning and management activities among agencies in the nine-county Bay Area region. In FY 2006-07, then-District Director Greg Zlotnick chaired the Bay Area Water Agencies Forum and currently as a District staff member, continues to co-chair the Bay Area Water Forum, as additional venues for policy-level coordination on water management issues and promoting linkages to land use decision makers.

The Bay Area IRWMP was completed in November 2006 and adopted by 24 agencies and entities around the Bay Area region. The Bay Area IRWMP encompasses all the water resources management programs and activities including: water supply and water quality, storm water and flood control, watershed management and ecosystem restoration, and wastewater management and recycling. The Bay Area IRWMP is the foundation document for agencies in the Bay Area to seek grant funding for Propositions 50, 84 and 1E for implementing multi-objective water management projects and programs.

The District partnered with San Benito County Water District (SBCWD) and Pajaro Valley Water Management Agency (PVWMA) to develop an Integrated Regional Water Management Plan that addresses the Pajaro River Watershed's water supply, water quality, flood protection, and environmental protection and enhancement goals. The District also entered into an MOU with SBCWD and PVWMA in 2004 to coordinate water supply planning and management activities.

The District participates actively in statewide, regional and local planning processes and promotes strategic partnerships that can provide improvements in water supply reliability, regulatory certainty, drinking water quality and facilitate program and project implementation.

To maintain sufficient water supplies to support economic growth and maintain the quality of life in our community, the District aims to ensure adequate water supplies in both the short- and long-term. Ensuring adequate supplies for the future has two aspects: maintaining the reliability of existing supplies through both wet and dry years and developing access to additional supplies to meet future needs. *(Ends policies 2.1.3 and 2.1.4)*

Water Supply Augmentation

Ensuring the availability of 300,000 AF annually to 15 cities spread over 1,300 square miles requires operation of the following facilities:

- 10 surface reservoirs with a capacity of 169,000 AF
- 17 miles of canals
- 4 water supply diversions
- 393 acres of recharge ponds
- 91 miles of controlled in-stream recharge in the county
- 142 miles of pipelines
- Three water treatment plants
- Three pump stations

To manage the county's water storage reservoirs, both surface and underground, the District operates and maintains a countywide conveyance and distribution system (see Water Conveyance, Treatment, and Distribution map, Appendix C). The system conserves local runoff for either recharge into the groundwater basin or treatment at one of the District's three water treatment plants. The District also operates several local pipelines to transport imported raw water and locally-conserved water to various locations within the system for treatment and distribution or for groundwater recharge.

The District has long-term agreements to purchase water to augment local water supplies through the CVP and SWP facilities. In addition, the District supports the development of recycled water and promotes water conservation in homes, business, and agriculture. A significant effort is also dedicated to preparing long-range water supply plans, including planning for droughts. The principal activities of the District in augmenting water supplies are described below. *(Ends policies 2.1.2, 2.1.3 and 2.1.4)*

Resource Protection

Preserving the quality of water supplies is more cost-effective than treating contaminated or degraded water. Pursuant to the District's mission to provide high-quality water to the county, the District continually addresses water quality problems that threaten the delivery of safe, reliable, high-quality water. This is to ensure that water delivered to the District's retailers meets or exceeds all state and federal drinking water regulations. The District also responds to unforeseen water quality issues and acts to ensure the continued ability to deliver high-quality water.

The following subsections describe the District's activities to protect groundwater and surface water:

Nitrate Management

The leading threat to groundwater supplies is nitrate contamination. High nitrate concentrations in drinking water can cause health problems in infants less than six months of age. Nitrate contamination is a particular concern in the southern portion of the county, but elevated concentrations of nitrate have also been reported in parts of the North County. The District has identified the main sources of nitrate in the South County/Coyote Valley area as fertilizer applications, septic systems and animal enclosures. The District continues to implement a Nitrate Management Program to monitor nitrate occurrence, reduce nitrate exposure and reduce nitrate loading throughout Santa Clara County.

To monitor long-term trends in nitrate occurrence, the District collects data from approximately 100 wells, supplemented by data from public water suppliers. The data indicate that, since the mid-1980s, nitrate concentrations appear to be declining in the Santa Clara Subbasin. Monitoring data since 1998 suggests that, in general, nitrate concentrations in the Coyote and Llagas subbasins are either steady or decreasing with some exceptions.

To reduce exposure to nitrate, the District offers a free nitrate analysis to all private water supply well users, if requested. Since 1998, more than 600 tests have been conducted. More than half the wells tested have exceeded the maximum contaminant level of 45 milligrams per liter of nitrate. Test recipients are given a copy of the results along with a fact sheet detailing what nitrate is, where it comes from, what the health risks are, how to remove nitrate using point of use treatment systems and how to prevent further contamination.

To reduce nitrate loading, the District has launched a series of workshops in conjunction with the University of California Cooperative Extension, Department of Agriculture, Farm Bureau and Natural Resource Conservation Service. Soil and water nitrate test kits, pocket guides, and brochures related to nitrate management in agriculture were distributed at various workshops. Over 250 people have attended these events.

To encourage more efficient water use and nitrate management, the District provided free in-field technical assistance on nutrient and irrigation management to growers through the In-field Nutrient Assessment Assistance Program (INAAP). This program directly addressed water and fertilizer use efficiency, their inter-relationships, and groundwater protection. The District offered incentives to eligible growers that participate in INAAP, in addition to those available for Mobile Lab participation.

About 60 Santa Clara County growers, accounting for approximately 16,000 acres or about 85 percent of the agricultural lands in the District groundwater charge zones, participated in local and regional INAAP by the end of 2006. The District is evaluating the next steps for agricultural nitrate management, in coordination with the Santa Clara County Farm Bureau.

The District has participated in some workshops in the past to help farmers with water quality issues, including conducting training sessions in groundwater protection, nutrient management, and irrigation system evaluation for the Farm Water Quality Planning Short Course. Currently staff is working on the collaboration with the Santa Clara County Farm Bureau to identify cost efficiencies in the nitrate management program. *(Ends Policy 2.1.6)*

Perchlorate

In late 2002, perchlorate, a chemical used in the manufacturing of road flares, rocket fuel, and fireworks, emerged as a significant contaminant in the Llagas Subbasin. The Olin Case in Morgan Hill has now affected more than 800 water supply wells with low levels of perchlorate in the unincorporated area of Santa Clara County known as San Martin, as well as Morgan Hill and Gilroy. The Central Coast Regional Water Quality Control Board (RWQCB) is providing regulatory oversight of the Olin Case and is directing the investigation and cleanup for perchlorate contamination in the San Martin area. Currently, the known extent of the plume extends 10 miles from the site to the Pacheco Pass Highway. The number of wells exceeding California's notification level for perchlorate has decreased dramatically in the last two years, from more than 200 wells above 6 parts per billion to 64 wells in October 2006.

Perchlorate has also been found in domestic and municipal wells located north of the Olin site. All of the City of Morgan Hill's supply wells have had occasional low level perchlorate detections. The RWQCB has ordered Olin to conduct additional investigations into perchlorate occurrence in the area northeast of the site, and to conduct remediation of the perchlorate found immediately north and east of the site.

Staff is continuing to support the Central Coast Regional Board's regulatory effort by providing groundwater data and information, technical assistance on investigation and cleanup oversight efforts, and logistical and technical support for Perchlorate Community Advisory Group meetings. In addition, staff is working closely with the Regional Board, County of Santa Clara, and the cities of Morgan Hill and Gilroy to ensure that the Regional Board's long-term corrective action plan meets all of the community's interests for water supply and groundwater cleanup. The District advocates that the responsible party must restore beneficial uses of groundwater for the Llagas Subbasin, and that the Regional Board enforce State Water Board Resolution 92-49, which requires cleanup of perchlorate to background levels.

In September 2007, the Central Coast Water Board issued a Draft Cleanup or Abatement Order, which is a compendium of previously issued directives to require cleanup of groundwater in the Llagas groundwater subbasin impacted by perchlorate contamination from the former Olin site in Morgan Hill. The draft Order brings together requirements for wellhead treatment, bottled water delivery, and characterization and remediation of perchlorate contamination. The draft Cleanup and Abatement Order requires cleanup to background levels and requires that work be started first where perchlorate contamination is highest. A public hearing by the Regional Board to consider adoption of this Order is scheduled for December 2007.

The District is developing projects to address perchlorate impacts using congressional funding. The first set of projects will use $745,600 of *Environmental Protection Management* funds, which require no matching funds from the District. The projects include the Perchlorate Background and Source Study and the Perchlorate Recharge Mitigation Feasibility Study. Both projects are underway; the former will be completed in 2008, while the latter will be completed by the end of calendar year 2007. *(Ends Policy 2.1.6)*

Groundwater Monitoring

The District collects water quality and water level data from wells throughout the county to manage, protect, and better understand the groundwater basins. Staff has been identifying process improvements to increase the cost-effectiveness of the monitoring program, including prioritizing the wells to be sampled. Staff is also studying opportunities to automate the collection of water levels in many of the District wells. The District now has groundwater quality or water level data on over 1175 wells, with 545 of these being actively monitored. *(Ends policies 2.1.5 and 2.1.6)*

Groundwater Guardian

The District has been designated as a Groundwater Guardian by the Groundwater Foundation, based on the District's groundwater protection efforts, since 2000. The Groundwater Foundation is a nationally recognized, private, non-profit, educational organization dedicated to protecting groundwater resources from contamination and over-drafting through outreach and education. As a Groundwater Guardian, the District supports community outreach and protection efforts, develops educational materials and provides technical assistance for groundwater protection activities. The District supports the Perchlorate Community Advisory Group's Groundwater Guardian Community work. *(Ends policies 2.1.5 ,2.1.6, 2.1.8)*

Solvents and Toxics Liaison

The District's Groundwater Management Unit provides peer review and coordinates with regulatory agencies on solvents, toxics, perchlorate, and other contamination cases that threaten groundwater quality. Activities that use chlorinated solvents and recalcitrant toxic chemicals can pose a significant threat to the groundwater basin and many of these activities have resulted in releases to soil and in some cases groundwater. The large number of electronics manufacturing plants, together with heavy industry and military facilities in Santa Clara County, has resulted in over 600 solvents and toxics releases that have affected soils and groundwater. The District provides peer review, tracks cleanup progress, and participates in several advisory committees to ensure that local groundwater resources are protected. Due to budgeting constraints, the District is not able to provide the level of review done historically, but staff continues to participate on the most significant cases.

Fuel leak cases are now administered by the County of Santa Clara Environmental Health Department. District staff coordinates with the County and monitors impacts to the groundwater basin and progress with cleanup of the more severe releases.

The District is completing an evaluation of the effects of releases of perchloroethelyne (PCE) from dry cleaners and other facilities that use PCE and has identified more than 1,000 former locations of dry cleaning operations that have operated in the last 70 years, in addition to the 220 active dry cleaning plants in Santa Clara County. District staff will be requesting the Regional Boards to ensure that possible PCE contamination associated with these operations is investigated and cleaned up if necessary. *(Ends Policy 2.1.6)*

Well Ordinance Program

The District protects the quality and quantity of the county's groundwater resources by ensuring that all wells in the county are constructed, maintained, modified, and destroyed in compliance with the District Well Ordinance and the State Well Standards.

The Well Ordinance Program includes permitting, tracking, inspecting, and violation enforcement of all wells in the county. *(Ends Policy 2.1.5)* During the first six months of FY 2006–07, the District:

- Permitted 1,767 wells and other deep excavations for construction or destruction
- Inspected 1,498 wells and other deep excavations constructed or destroyed
- Registered 830 new wells

HAZMAT Emergency Response Program

The District Emergency Response Team provides 24/7 response to District employee, public, and inter-agency reports of hazardous materials (HAZMAT) and other polluting substances that have been discharged or deposited in a manner that may impact District watersheds, water supplies, ground and facilities. Response activities include timely response, site reconnaissance, incident command, sampling and analysis, contaminant clean-up, interagency notification and coordination, as well as cost recovery and enforcement support. In addition to meeting water quality policies outlined in the Ends Policies, emergency response is performed to support both Clean, Safe Creeks and Urban Runoff Program commitments. *(Ends policies 2.1.1.1, 2.1.6, 2.2.1, 3, and 4.2*

Water Use Efficiency: Water Recycling and Desalination

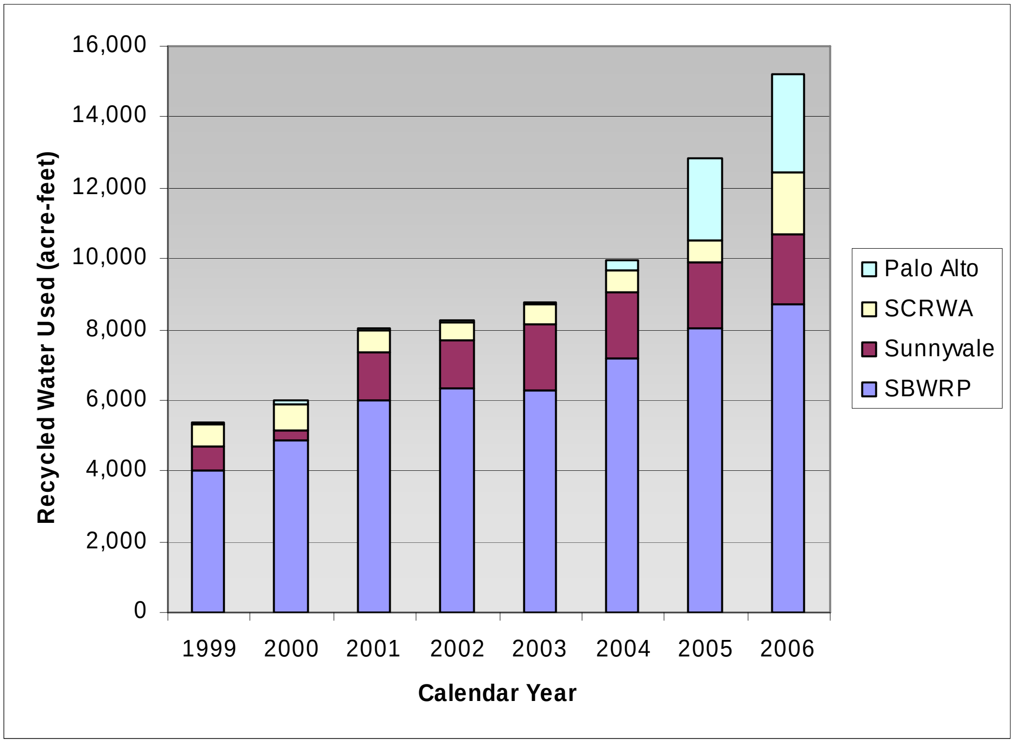
Water Recycling

The amount of recycled water used in Santa Clara County during calendar year 2006 was approximately 15,193 AF. As shown in Figure 2-4, this performance shows an increasing trend from past years. The District expects to see a slower increasing trend through 2007 since two major recycled water users (i.e., two power plants) started using recycled water in 2005 and these power plant users are already included in the 2006 numbers. No such big user is expected in the near-term future planning horizon. However, an increase in recycled water use can be expected in South County from a few new customers. It is estimated that recycled water accounted for just over 4 percent of the total countywide water used in calendar year 2006. The District's Board policy aims for recycled water to be 5 percent of total water use in the year 2010 and 10 percent of total water use by 2020. *(Ends policies 2.1.7.1 and 2.1.7.2)*

The District's 2005 UWMP indicates that based on the projections of recycled water uses for the future, the District will be very close to meeting its recycled water target by 2010. However, it will not meet its target by 2020 unless significant effort and resources go into meeting this target for recycled water expansion. The

District's commitment to meeting this 2020 target is validated in this statement in the UWMP: "The District is considering options for additional recycling to meet this 2020 target including advanced recycled water treatment and use of that water for groundwater recharge and stream flow augmentation to further expand water recycling within Santa Clara County."

FIGURE 2-4
Recycled Water Used in Santa Clara County



Note: In plant recycled water usage is reflected in Figure 2-4, beginning in 2005.

Desalination

The IWRP 2003 identifies desalination as a building block in the District's long-term future water supply portfolio FY 2006-07. The District anticipates meeting the 2003 IWRP target to desalinate 10 million gallons per day in the future, by continuing the direction undertaken through our projects, joint partnerships and studies. In FY 2006-07, the District continued in its joint partnership project on a regional desalination facility to serve the Bay Area. The District's partners in this Feasibility Study effort are the SFPUC, East Bay Municipal Utility District, Contra Costa Water District and the state Department of Water Resources (DWR). DWR is paying for half the project costs. In FY 2006-07, these same water agency partners including DWR have committed to move ahead with a pilot desalination plan to further refine design, operation and maintenance costs for a full scale facility. Again, DWR is paying for approximately 50 percent of the pilot plant costs. The participation in the pilot study was approved by the Board in October 2006.

Projects:

The Water District is participating in the planning, design and construction of recycled water facilities in Silicon Valley. Among these are:

Silver Creek Pipeline: As part of an agreement with the City of San Jose, the District funded approximately $5.5 million (25 percent of cost) for the actual construction cost of the Silver Creek pipeline. Construction of the pipeline was completed in mid-2005 and put into use in 2006 providing up to 3.5 million gallons of recycled water a day from the San Jose/Santa Clara Waste Water Treatment Plant to the Metcalf Energy Center for cooling water purposes and can potentially serve other customers along this pipeline alignment. This pipeline also provides the District with a guaranteed 5 million gallons per day of recycled water for future use in Coyote Valley.

South County Recycled Water Master Plan: The District and the South County Regional Wastewater Authority (SCRWA) developed a Recycled Water Master Plan. This Master Plan recommends immediate-, near- and long-term system improvements in the recycled water system intended to serve the Uvas/Llagas area. In 2006, he District invested approximately $3.37 million towards projects recommended in the immediate-term Master Plan. The District and SCRWA received $1.94 million from the State to help fund these immediate-term project construction costs, the total cost of which is $8.87 million. CEQA compliance was completed in 2005 and construction began in 2005 for the immediate term project which includes 4,800 feet of distribution pipeline, a 3-million-gallon recycled water reservoir, a 3-million-gallon pump station and 6-million gallon-per-day tertiary filter expansion.

Agency Agreements:

Rebates Agreement: The District is helping San Jose and Sunnyvale in production and expansion of recycled water within the county through a rebate agreement with South Bay Water Recycling and the City of Sunnyvale that pays $115/AF for recycled water used to offset District potable supplies. The cost to the District is $1,078,872.50 million for FY 2006-07 and the anticipated cost to the District for FY 2007-08 is $1.3 million. The District is negotiating more active partnership roles in water recycling with South Bay Water Recycling and Sunnyvale in future agreements, and this may include incorporating other tangibles like joint signage acknowledging District participation at recycled water facilities and in recycled water marketing and outreach material. New future agreements will move from passive reimbursement to more meaningful incentives.

Producer Wholesaler Agreement/Wholesaler Retailer Agreement: The District, South County Regional Wastewater Authority, and the cities of Gilroy and Morgan Hill entered a partnership agreement to develop a marketable water recycling program in South County and provide for future expansions.

Studies:

The Santa Clara Valley Water District is conducting studies and research investigating the potential implications of recycled water usage, and attempting to provide solutions that lead to expanded uses of recycled water in this county. The District is also investigating the feasibility of ocean, bay and brackish desalination in this county. Among the studies being undertaken are:

Salinity and specific ion tolerance of coast redwood: coast redwood trees have been grown in a greenhouse and irrigated with waters of various qualities to determine their tolerance to salinity, sodium and chloride.

South Bay Advanced Recycled Water Treatment Facility: The District and the City of San Jose (City) with the endorsement from the Silicon Valley Leadership Group, are collectively pursuing construction of an advanced recycled water treatment facility to be located in the vicinity of the San Jose/Santa Clara Water Pollution

Control Plant. The advanced treated recycled water facility would markedly improve the quality of recycled water to sustain current baseline users. It may also enable future recycled water applications over sensitive groundwater basins in East San Jose while protecting our precious groundwater resources. The Coyote Valley Specific Plan development would also be a targeted area for advanced treated recycled water use. This 5-8 MGD plant is the necessary first step for the above purposes. The facility will also serve as a pilot plant to monitor the effectiveness and reliability of the treatment process for future groundwater recharge and reuse.

In early 2007, the State awarded approximately $3 million in grant funding to be used for the implementation of this advanced treatment facility. On a separate effort, staff has included the Advanced Treatment Plant Project under the Water Resources Development Act (WRDA) of 2005 requesting a $5.5 million federal grant. The District is also seeking federal financial assistance through the Miller Bill 2007 for $8.25 million.

The joint project with the City of San Jose moves from passive recycled water reimbursements by the District and into a more direct partnership to promote water recycling.

Groundwater Monitoring: The District has developed a groundwater monitoring network to detect any changes in groundwater quality in areas using recycled water. Groundwater monitoring at recycled water use sites is an on-going operation.

Water Softener Pilot Project: The District successfully completed this pilot study in December 2005. The objectives were threefold: (1) to assess the optimal value of incentive offers necessary to attract customers to use more efficient water-softening technology; (2) to reduce the amount of salt these systems add to wastewater impacting recycled water; and (3) to conserve water and energy. Approximately half of the funding for this project came from a Proposition 13 grant. The program issued 400 rebates ($150 each) to single-family houses. The results of this pilot study yielded a savings of 1.3 million gallons of water per year and reduction of 240,000 lbs of regeneration salt which would otherwise be discharged to wastewater treatment plants. This pilot study demonstrated the effectiveness of partnership with water retailers, water softener manufacturers and distributors.

In 2005, the District, in partnership with San Benito County Water District, was awarded a DWR grant of $150,000 for each agency for their own larger countywide water softener rebate project. In addition, in 2005, the District and the City of Gilroy agreed to have an additional 200 rebates for South County residents. The $30,000 cost for the 200 rebates is to be paid for by the City of Gilroy. In 2006, roughly 100 rebates were issued for this program in South County. In 2006, the Memorandum of Agreement between the District and San Benito County Water District was executed and this program is continuing.

Streamflow Augmentation Research using Recycled Water: The District, as a subcontractor to MWD has secured DWR funds that will account for approximately 50 percent ($300,000) of the total project costs (i.e., $600,000) to study use of tertiary treated recycled water for stream flow augmentation. The objective of this project is to assess the potential impact of large-scale augmentation of the Coyote Creek flow with tertiary treated water on the water quality of the creek and the underlying groundwater. In 2006, active coordination with the permitting agencies and the City of San Jose occurred. In September 2007 the CEQA document for the Streamflow Augmentation Research was released for public comment. Staff is awaiting completion of CEQA prior to any release of recycled water in Upper Silver Creek, a tributary to Coyote Creek for stream-flow augmentation evaluation.

Low Fouling Membrane Pilot Work: In 2005, the District began a pilot study to determine if low-fouling reverse osmosis (LFRO) membranes can be used to treat recycled water to an advanced level at a lower cost than the current method. The current method includes microfiltration (MF) as a pretreatment before reverse osmosis. If it is feasible to use LFRO on SBWR tertiary recycled water, the cost savings for advanced treated recycled water would be tremendous. The District is partnering with the City of San Jose on this project. MWD will use federal funding to provide a grant to SCVWD for this work. In 2006, using the District's consultant selection process, a consultant was selected and contract executed. Work on this study will continue through FY 2007-08.

Irrigation water quality requirements of Santa Clara County soils: Column studies have been undertaken on soil samples representing major soils in the Santa Clara and Llagas Valleys to determine the water quality requirements necessary to maintain their structural integrity under irrigation and winter rainfall.

Bay Area Regional Desalination Study: In 2003, the District with East Bay Municipal Utility District (EBMUD), Contra Costa Water District and SFPUC began undertaking a project to analyze the feasibility of a regional desalination facility. The IWRP Study 2003 identifies desalination as a building block in the District's long-term future water supply portfolio. Desalinated water could be used as a long-term water supply, an emergency supply, a drought supply and an intermittent supply during shutdowns for maintenance by the various water agencies in the SFPUC region. In 2005, the partners jointly applied for and were awarded $250,000 in state grant funds for completing a $500,000 feasibility study. The feasibility study was completed in July 2007 and the (draft) Final Report is at DWR for approval. The study indicates that there are technical and economically feasible locations to site a regional desalination facility.

In 2006, the partners applied for state grants to construct an actual pilot desalination test unit. The partners were notified in mid-2006 that they will receive approximately $949,000 towards a $1.9 million pilot facility. The participation in the pilot study was approved by the District Board in January 2007. Pilot plant consultant selection process occurred in early 2007 with EBMUD as the consultant contracting agency. Pilot plant work will begin in August 2007. The pilot plant should be operational in early 2008. Operating a pilot plant will allow for cost estimate refinement, provide for future full-scale permit information, and fine-tune the design criteria.

Brackish Desalination Pilot Study: The District, as a subcontractor to MWD has secured DWR funds that will account for 50 percent (i.e., $257,000) of the total project costs to perform a pilot study to evaluate the feasibility of using innovative brackish groundwater treatment technology for brackish water desalination. The District partnered with Stanford University in this project and in 2006, pilot units were installed for operation at two locations: Gilroy and San Benito County. The pilot project was completed in early summer 2007.

Flood Protection and Stream Stewardship Program

To address community expectations and the District Board's Ends Policies on quality of life in the county, the District is using additional funding from its voter-approved special tax to provide for restoration and enhancement of natural resources within our watersheds. This element is an important part of the Clean, Safe Creeks and Natural Flood Protection Plan approved by county voters in November 2000.

The Clean, Safe Creeks plan also protects water quality in our creeks and bays and benefits water supplies. Portions of the additional funding is used to keep our creeks cleaner and free from trash and pursue improved detection and management of toxic materials (such as mercury and diazinon) that pollute our water supplies, creeks and bay.

The District also participates in the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) as a co-permittee. The objective of the SCVURPPP is to protect stream resources by preventing pollution from entering our creeks and the Bay. Each of the co-permittees implements its own, agency-specific storm water pollution prevention program. These activities, and the level of implementation, are specified in performance standards. Currently, the District implements Performance Standards for:

- Illicit Connection and Illegal Dumping Elimination Activities
- Industrial/Commercial Discharger Control Program

- Public Streets, Roads, and Highways Operation and Maintenance
- Storm Drain System Operation and Maintenance
- Water Utility Operation and Maintenance
- Planning Procedures
- Construction Inspection

In addition, the District collaborates in various program-wide efforts, including public education and monitoring.

Urban Runoff Program

The District Urban Runoff Program is dedicated to surface water quality protection. This permit-required program conducts projects that integrate into District-wide watershed and water utility enterprise operations to prevent storm water runoff pollution and protect and enhance the quality of water in Santa Clara County streams and water bodies. This includes the training of District staff and conducting outreach efforts to facilitate the improvement of stream water quality in the Santa Clara County. The program provides training and outreach and conducts monitoring to ensure the improvement of the quality of storm water that flows into streams of the Santa Clara Valley and the San Francisco Bay. Under a MOA revision approved by the District Board on December 20, 2005, the District is continuing its participation as one of 15 co-permittees in the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) Municipal Storm Water Permit from the San Francisco Bay RWQCB. Additionally, the District, under its Clean, Safe Creeks and Natural Flood Protection program is extending storm water pollution prevention efforts into south Santa Clara County. Combining efforts with other local agencies allows for collaboration in countywide Urban Runoff Program activities. *(Ends Policy 2.2.1)*

ENDS POLICY E-3

Ends Policy E-3 states, *"There is an enhanced quality of life in Santa Clara County through the protection and enhancement of watersheds, streams, and the natural resources therein."* This policy strives to accomplish three goals. The first goal is to ensure that mitigations are implemented to protect watersheds, streams, and the natural resources therein. The second goal is to implement environmental enhancements to improve watersheds, streams, and the natural resources therein. And, the third goal is to make additional trails, parks and open space along creeks and in the watersheds that are accessible to the public when reasonable and appropriate. Watershed Operations is primarily responsible for accomplishing this Ends Policy. However, the Water Utility Enterprise also has a minor role in carrying out this policy. The program and the specific ends policy(ies) that the program is designed to fulfill are as follows:

Stream and Watershed Management

The District plays a key role in balancing the water needs of a growing economy with those of the environment. The District has initiated a watershed management approach as a responsible steward of watersheds, including streams and riparian corridors. For example, through the Fisheries and Aquatic Habitat Collaborative Effort (FAHCE), the District has been working since 1997 with federal, state, and local agencies, as well as local environmental groups to improve conditions for local fisheries while meeting the demands for a reliable water supply.

Stream maintenance projects are planned, designed, constructed, and operated in an environmentally sensitive manner to address reservoir water storage, and in-stream and off-stream groundwater recharge. Project specific measures are taken to protect sensitive species, water quality, fisheries, riparian and wetland resources. New management practices include scheduling the work to avoid impacts to nesting birds, removing sediment from half of the channel in alternating years on certain creeks, diverting flows around a work site, reseeding disturbed areas and relocating fish.

Together, the foregoing activities strive to protect county habitat, while accommodating water supply and other human impacts. *(Ends Policy 3.1)*

ENDS POLICY E-4

Ends Policy E-4 states, *"There is a positive District image in the community which supports the carrying out of the District's mission."* This policy strives to attain a workforce of District staff that has the knowledge and expertise in subject matter that is integral to the future of water resource management in Santa Clara County. The policy also strives for increased positive interaction with the community. Although Administration and the Office of Government and Public Relations are primarily responsible for Ends Policy 4, the Water Utility Enterprise also contributes to carrying out this policy through its Community Relations program.

Office of Government and Public Relations

The Office of Government and Public Relations comprises two units. The Government Relations Unit facilitates and executes strategic external partnership activities at the federal, state, local and regional levels to support District policy objectives. The federal, state and local government consists of 15 cities and municipalities, 12 local chambers of commerce and business groups, and a legislative delegation consisting of 7 assembly members, 4 senators, and 4 members of Congress.

The Government Relations Unit serves as the internal and external connection for: legislation, development of strategic support and opposition, and supplemental funding opportunities for the District. This unit tracks and reviews approximately 325 legislative proposals each year at the state and federal level. Additionally, the unit reduces operating costs by vigorously advocating for federal and state funding of District projects. (Ends Policy 4.2)

The Public Relations Unit works in partnership with the Water Utility Enterprise, Watershed Operations, Administration and Capital Programs Services to enable the District to communicate its mission while strengthening its relationships with the community, and communicating the value of water to the public in order to achieve its Ends Policies. Such communication efforts are an important component of water utility operations, including management of local water resources, and education and assistance with water conservation and resource protection programs, as they help ensure safe and reliable supplies. The office develops and integrates the District’s key messages through its public information, marketing, and media efforts. The office promotes the District’s brand image; serves as principal liaison to the media; develops outreach information for the public; helps shape public opinion; and mobilizes support for District activities throughout Santa Clara County. (Ends Policy 4.2)

Water Utility Community Relations Program

Under the direct supervision of the utility’s assistant general manager, the Water Utility Community Relations Program fosters positive relationships with key customer groups including water users, well owners, retailers and neighbors of District facilities. The program supports the communication needs of capital and maintenance projects and manages marketing efforts related to water utility issues such as water conservation. *(Ends Policy 4.2)*

CAPITAL IMPROVEMENTS

The District constructs and maintains reservoirs, pipelines, recharge ponds, and water treatment plants that are needed to achieve the Board’s Ends Policies.

Project management and engineering services for planning, design and construction of the District’s capital projects are provided by Capital Program Services (CPS). CPS is also responsible for the development, management, monitoring and tracking of the District’s Capital Improvement Plan (CIP). This plan is intended to identify and plan for the District’s five-year capital improvement spending, the sources to fund the long term plan and the staffing level to execute the long-term plan.

Some major water utility capital improvement projects currently in progress include Lenihan Dam Outlet Modification, Water Treatment Improvement Projects Stage 2, and Almaden Campus Water Quality Laboratory. Each of these capital projects is designed to carry out one or several of the Board’s Ends Policies. The objectives of these projects are as follows:

- The Lenihan Dam Outlet Modification Project will correct deficiencies in the outlet pipe of the dam so that the operational restrictions imposed by the California Division of Safety of Dams (DSOD) can be removed. The project is currently in the design phase with construction to begin in late 2007.
- Stage 2 of the water treatment plant process upgrades will further reduce the levels of disinfection by-products and potential for microbial contaminants in treated water and to further improve water quality. This will include switching to ozone as the primary disinfectant instead of chlorine and installing filter-to-waste and washwater clarification facilities. The Stage 2 work also includes structural modifications to improve treatment plant reliability during seismic events and process additions to increase treatment capacity at the Rinconada plant to meet projected future demands. The improvements ensure the District’s treated water quality meets or exceeds all applicable regulations and improves the reliability of the three treatment plants. Construction of the improvements at the Santa Teresa and the Penitencia plants are complete. The construction schedule at the Rinconada plant is under review.

- The Almaden Campus Water Quality Lab will provide modern facilities to test raw water from reservoirs before it goes to the water treatment plants for purification and treated water on a daily basis to ensure it meets all regulations. In all, the District's laboratory conducts more than 138,000 tests each year for bacteria, turbidity, hardness, pH, trihalomethanes, organic substances, metals, pesticides, fertilizers, and toxic chemicals. The new laboratory facility is under construction and is scheduled to be completed by the end of 2007.

ASSET MANAGEMENT PROGRAM

Development of the Asset Management Program was started in January 2002 to provide a better basis for identifying long-term capital rehabilitation and replacement needs. This program's goal is to lower the cost of asset ownership and improve system reliability by establishing a life-cycle preventative and corrective maintenance schedule for each of the District's assets as well as renewal and replacement schedules. Since the program's inception, assessments on all assets have been completed at least once (with the exception of a limited number of assets such as newly installed equipment at Santa Teresa and Penitencia water treatment plants).

Table 2-1 shows expenditures for FY 2005–06, the projected year-end capital expenditures for FY 2006–07 and planned funding for the next ten fiscal years. The cumulative investment between FY 2007–08 and FY 2016–17 is projected to be approximately $603 million (inflated).

TABLE 2-1
Capital Improvement Projects —Fiscal Years 2005–06 Through 2016–17 (Thousands of Dollars, Inflated)

Job	FY06 Actuals	FY07 Projected Year-End	FY08 Adopted Budget	FY09 Projection	FY10 Projection	FY11 Projection	FY12 Projection	FY 13-17 Projection
SOURCE OF SUPPLY								
Dam Instrumentation*	772	3,723	1,916	6,281	265	-	-	-
Geodetic Control Mainten Prog*	51	2	-	-	-	-	-	-
Bay Area Regional Desalination, Mallard Slough Pilot Plant	-	255	5	40	-	-	-	-
So County Recycled Water Impro*	1	168	-	-	-	-	-	-
Recycled Water Masterplan - Immed Term Implementation*	3,075	(1,366)	145	-	-	-	-	-
San Tomas Wellfield	846	4,781	652	-	-	-	-	-
Water Banking Project*	18,895	-	-	-	-	-	-	-
Water Efficient Demonstration Garden	-	259	1,634	63	-	-	-	-
Advanced Recycled Water Pilot Plant	16	2,886	55	12,837	7,281	-	-	-
San Luis Low Point Improvement	146	365	1,056	3,568	165	-	-	-
Pacheco PP Regulating Tank Recoating*	-	-	223	211	-	-	-	-
San Felipe Communications Cable Replacement*	-	-	264	424	1,832	-	-	-
Santa Clara Tunnel Landslide Repair*	32	28	29	28	-	-	-	-
Santa Clara Tunnel Landslide Mitigation*	18	95	227	521	-	-	-	-
Vasona Pump Station Chemical Feed	0	-	-	-	-	-	-	-
Water Infrastructure Reliability Program*	33	-	-	-	-	-	-	-
Water Infrastructure Reliability (Phase 1 Implementation)*	22	1,983	81	-	-	-	-	-
Almaden Dam Outlet Works Improvement	114	-	-	548	564	1,163	4,745	9,041
Jacques Gulch Restoration	410	1,071	515	3,766	286	76	45	-
Calero/Fellow's Dike Improvement	573	631	902	597	212	6,572	169	-
Lenihan Dam Outlet Modifications	2,490	2,701	24,110	24,119	710	-	-	-
Pacheco Pumping Plant ASD Replacement*	16	492	979	9,276	339	349	359	697
Recycled Water Masterplan - Short Term Implementation*	-	-	-	3,795	6,581	-	-	-
Source of Supply Subtotal	**27,508**	**18,074**	**32,793**	**66,074**	**18,235**	**8,160**	**5,318**	**9,738**
RAW WATER TRANSMISSION & DISTRIBUTION								
Central Pipeline Rehababilitation	860	2,491	-	-	-	-	-	-
Vasona Addition and ADA Mods	54	87	-	-	-	-	-	-
Vasona Pumping Plant Electrical PJT	0	-	-	-	-	-	-	-
Raw Water Control System*	1,684	656	-	-	-	-	-	-
Alamitos Diversion Dam Improvement	-	207	612	2,522	48	-	-	-
Coyote Diversion Dam Improvement	-	25	652	210	2,144	424	-	-
Kirk Ditch	0	-	1,398	271	-	-	-	-
Kirk Diversion Dam Improvement	-	0	309	1,694	438	-	-	-
Kirk Diversion Fish Screen	-	-	224	1,151	-	-	-	-
Main Avenue Pipeline*	-	-	918	1,145	6,360	-	-	-
Vasona Canal Improvement	-	-	134	-	-	-	-	-
Almaden Calero Canal Rehab	1	-	637	637	6,769	1,255	367	-
San Pedro Recharge Facility*	48	-	-	-	-	-	-	-
South County Pipeline Right of Way Acquisition*	-	-	-	262	206	1,595	-	-
Vasona Pumping Plant Electrical Upgrades	-	-	-	-	-	-	-	6,621
FAHCE Stevens Creek Fish Ladder at Evelyn Ave - 90%	-	-	-	-	-	-	-	4,028
FAHCE Stevens Creek Fish Ladder at Moffett Ave - 90%	-	-	-	-	-	-	-	4,177
FAHCE Stevens Creek Fish Ladder at Fremont Ave - 90%	-	-	-	-	-	-	-	7,353
FAHCE Stevens Creek Dam Portable Multi-Port Outlet - 90%	-	-	-	-	-	-	-	1,697
Page Desilting System Improvements	-	-	-	440	815	-	-	-
Santa Clara Valley Recharge Ponds	-	-	-	-	341	351	6,923	16,153
IRP2 Raw Water SCADA Control System at Almaden*	-	-	-	33	112	808	602	-
IRP2 Self Sufficent SCADA System	-	-	-	685	705	2,394	1,845	-
Stevens Creek Diversion	-	-	-	-	-	151	-	-
Penitencia Fish Facilities	-	-	-	-	283	232	180	912
Raw Water Transmission & Distribution Subtotal	**2,649**	**3,467**	**4,884**	**9,050**	**18,221**	**7,210**	**9,917**	**40,940**
TREATED WATER TRANSMISSION & DISTRIBUTION								
Water Protection*	22	348	4,041	4,687	-	-	-	-
SCVWD SFWD Intertie	2	19	309	71	-	-	-	-
DHS Compliance, Treated Water PL Modific	167	-	-	-	-	-	-	-
Rinconada Res Roof Rehab	20	-	-	-	-	-	-	-
Santa Clara Distributary Turnout	-	-	98	1,117	-	-	-	-
IRP2 Additional Line Valves	-	-	-	-	-	-	-	9,509
Treated Water Transmission & Distribution Subtotal	**211**	**367**	**4,447**	**5,875**	**-**	**-**	**-**	**9,509**

TABLE 2-1 continued…
Capital Improvement Projects —Fiscal Years 2005–06 Through 2016–17 (Thousands of Dollars, Inflated)

Job	FY06 Actuals	FY07 Projected Year-End	FY08 Adopted Budget	FY09 Projection	FY10 Projection	FY11 Projection	FY12 Projection	FY 13-17 Projection
WATER TREATMENT								-
WTP SCADA Upgrades	241	621	1,976	1,041	771	437	-	-
SCADA System Cyber Security	-	412	-	-	-	-	-	-
PWTP Water Treatment Improve Proj33	6	(2)	-	-	-	-	-	-
PWTP Water Treatment Improv Stage 2	5,494	3,363	286	-	-	-	-	-
PWTP Maintenance Bulilding	544	360	5,050	134	-	-	-	-
PWTP Chemical System Upgrade	3	49	354	1,682	147	-	-	-
PWTP Standby Power Upgrade	259	69	1,767	69	-	-	-	-
PWTP Wastestream Separation	0	-	-	-	-	-	-	-
PWTP Backwash Pump ASD Replacement	-	55	324	698	33	-	-	-
WTIP Mitigation, Landscape and Site Improvements at PWTP	651	3,560	381	144	-	-	-	-
Telephones at PWTP	41	18	41	183	-	-	-	-
Telephones at Vasona	42	29	413	-	-	-	-	-
STWTP Water Treatment Improv Proj33	6	(2)	-	-	-	-	-	-
STWTP Water Treatment Improv Stage 2	4,851	1,363	52	772	-	-	-	-
STWTP Incompatible Materials	163	131	812	2,855	1,347	144	-	-
WTIP Mitigation, Landscape and Site Improvements at SWTP	78	398	1,534	985	36	156	-	-
Telephones at STWTP	149	15	25	-	-	-	-	-
RWTP Water Treatment Improve Proj34	7	(2)	-	-	-	-	-	-
RWTP Water Treatment Improv Stage 2	1,194	2,545	-	6,283	12,943	31,274	41,036	107,751
RWTP Chemical System Upgrade	2	(1)	2,774	865	53	-	-	-
RWTP Backup Disinfection	121	-	-	-	-	-	-	-
RWTP Standby Power Upgrade	158	211	1,512	1,583	46	-	-	-
Visual Screening at RWTP	0	7	-	-	-	-	-	-
Telephones at RWTP	92	3	877	-	-	-	-	-
RWTP Control System Trunk Cable Upgrade	18	179	544	103	-	-	-	-
RWTP Caustic Soda Feed Syst Replacement	1,214	112	-	-	-	-	-	-
RWTP Valve Replacements	-	-	4,847	1,669	53	-	-	-
RWTP Treated Water Distribution Flow Meter	-	-	511	206	-	-	-	-
RWTP Backwash Pump ASD Replacement	-	-	161	686	32	-	-	-
Almaden Campus Water Quality Laboratory	1,343	20,212	3,182	-	-	-	-	-
Seismic Study and Retrofit of WTPs and Ops Bldg	-	-	945	1,817	4,721	4,988	4,816	2,334
RWTP Chemical Storage Structure Seismic Upgrades	-	-	-	-	-	-	495	2,868
RWTP BL-1 Valve Vault	-	-	-	-	-	-	-	1,572
PWTP Washwater Clarification Facility	-	-	-	-	-	-	-	8,000
Water Treatment Subtotal	**16,681**	**33,704**	**28,366**	**21,775**	**20,182**	**36,999**	**46,347**	**122,525**
ADMINISTRATION & GENERAL								
CSC Stevens Creek Corridor Restoration, Blackberry Farms	-	-	309	-	128	-	-	-
Almaden Campus, Administration Building Seismic Retrofit - 63%	-	-	613	3,570	167	-	-	-
Corporation Yard Relocation - 38%	-	-	289	98	-	-	-	-
ISMP Computerized Maintenance Management - 50%	-	-	24	43	-	-	-	-
ISMP Enterprise Resource Planning System - 33%	-	-	6	58	-	-	-	-
ISMP Water Resource Information System	-	-	748	170	-	-	-	-
Radio Repeater System Infill	-	-	267	-	-	-	-	-
Microwave Telecommunications System	-	-	537	556	587	620	408	-
CPS Health and Safety Program*	-	179	-	-	-	-	-	-
CPS Labor Collaborative & Rela*	-	97	91	137	120	122	166	756
Workforce and Knowledge Development - CPSD*	878	1,469	1,388	2,829	2,493	2,531	3,426	15,654
Quality Management-CPSD*	270	231	96	138	125	129	128	640
CEQA Administration-CPSD*	104	100	70	102	93	95	95	473
CIP Development & Admin - CPSD*	229	257	70	142	125	127	172	786
Construction- Mgt&Admin*	534	617	307	580	528	544	539	2,696
CADD- Mgt & Admin*	224	281	59	85	78	80	79	396
Survey- Mgt & Admin*	292	262	330	457	415	428	424	2,121
Real Estate- GSD Mgt & Admin*	285	194	255	540	492	506	502	2,510
CPSD Management & Support*	1,586	1,434	1,419	2,045	1,861	1,916	1,899	9,499
Administration & General Subtotal	**4,402**	**5,119**	**6,877**	**11,550**	**7,212**	**7,100**	**7,838**	**35,533**
TOTAL	**51,450**	**60,731**	**77,368**	**114,324**	**63,850**	**59,469**	**69,420**	**218,244**

Note: The asterisked projects would benefit the South County/Coyote Valley and therefore would be funded in part or in whole by the South County/Coyote Valley.

3. FINANCIAL OUTLOOK FOR THE WATER UTILITY ENTERPRISE

INTRODUCTION

The purpose of this section is to describe the short-term and long-term financial requirements for achieving the Board's Ends Policies and to present a funding approach. This section summarizes the adopted water charges for FY 2007–08 and the multi-year financial analysis and funding approach that serves as the foundation for the adopted charges in each zone. The multi-year analysis includes a series of increases in water charges in each zone for the next ten years in combination with additional debt financing. Appendix B describes the water utility revenue sources, cost centers, and reserves as well as Board policy regarding finances.

The District's major sources of revenue are from the imposition of charges on groundwater and from contracts for the sale of treated surface water produced by its three treatment plants. The District also receives revenue from property tax, interest earnings, grants, capital reimbursements and other sources. The District assesses the need for groundwater charges annually and, in accordance with state law, prepares this report to describe the activities undertaken to provide a water supply, along with the associated capital, maintenance, and operating requirements.

The District's revenue requirements remained relatively stable for the period from 1993 to 1998 and charges were held constant. In 1998, the utility made the first of a series of capital investments required to comply with new water quality regulations. The District also invested more in recycled water, water banking, and infrastructure repair and maintenance to improve water supply reliability. Between FY 2003–04 and FY 2004–05, payments for water purchased from the federal government doubled. Consequently, the North County groundwater extraction charge increased from $240 per AF in FY 1997–98 to $435 per AF in FY 2006–07.

In the South County/Coyote Valley, the M&I groundwater extraction charge increased from $108/AF in FY 1997–98 to $230 per AF in FY 2006–07. The increases were necessary due to the higher payments for purchased water from the federal government, expansion of services in the areas of recycled water, water conservation, asset management, security, and groundwater quality management, and maintenance work on facilities and pipelines.

In response to a number of external challenges over the past few years, staff has made a concerted effort to reduce costs and associated water charges in accordance with the GM's vision of "Getting Cleaner, Greener, and Leaner Together." Staff has taken several actions toward that vision including reducing permanent positions, reducing discretionary reserves and postponing capital and operations projects. Consequently, the Board adopted groundwater charges in FY 2005–06 and FY 2006–07 that were much lower than projected back in April of 2004.

Table 3-1 shows groundwater and other charges in fiscal years, 2004–05, 2005–06 and 2006-07. The final column contains the adopted groundwater charges for FY 2007–08, which are in accordance with the pricing policy described in Appendix B.

Over the past year and a half, the District has received the results of several external assessments including a comprehensive performance audit by Red Oak Consulting, a Grand Jury report, and a California Awards for Performance Excellence (CAPE) feedback report. One of the themes in these assessments is the need for the District to work more closely with its customers and partners. Consequently, the District is moving toward a more inclusive approach with its customers and partners to set priorities and address common issues. Staff recognizes that there is much work to be done to understand customer needs and anticipates refining the scope and cost of many projects that would be funded under the adopted groundwater charges.

This year's groundwater charge projection is illustrated in Figure 3-1. It reflects a range of potential groundwater charges over the next ten years depending on the level of service that would be provided. Staff analyzed several different levels of service in terms of operations and capital projects. The high end of the range represents the groundwater charges required to fund all of the operations and capital projects identified by staff to meet the Board's ends policies over the next few years. While staff has identified as many projects as possible, there are several initiatives in progress and/or potential future uncertainties that could result in the identification of additional capital or operations projects. These include, but are not limited to:

- Investments associated with the Coyote Valley Specific Plan
- Investments associated with North San Jose Development
- Potential Integrated Water Resources Plan (IWRP) investments that may be required due to future changes in water supply or demand conditions
- Impacts of the Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP)
- District's participation in potential solutions to Bay Delta water quality problems
- San Felipe Division facility refurbishments

The lower end of the range represents the adopted groundwater charges for FY 2007–08 and the corresponding future trajectory based on the assumption that operating services will continue at the same level provided in the FY 2007–08 budget. Although the Board increased groundwater charges in FY 2007–08 to cover preventative and corrective maintenance costs at existing District facilities, some additional unmet operational needs identified by water utility staff would continue to be delayed indefinitely unless efficiencies can be found. If unmet operational needs remain unfunded, then the ability of staff to achieve the Board's ends policies in the long term would be sacrificed. The potential impacts include increased risk of (1) service interruptions, (2) higher corrective maintenance costs to repair facilities that have not been well maintained and (3) reduced ability to respond to drought.

Both the low end and the high end of the groundwater charge projection are higher than what was projected last year. This is because staff has observed dramatic increases in the actual bids for its capital projects relative to the engineers' estimates over the past couple of years. Agencies all over the state have experienced the same phenomenon and there is no relief in sight given the global raw materials demand driven by China and the projected construction demand in California. Consequently, staff has increased the construction cost inflation assumption used in the financial model from 3 percent per year to 7 percent per year plus a 15 percent market condition adjustment in the year of bid. The adopted charges for FY 2007-08 will support the operating and revised capital budget for the Water Utility. The Water Utility plans to invest nearly $603 million (inflated dollars) in capital improvements from fiscal years 2007–08 to 2016–17.

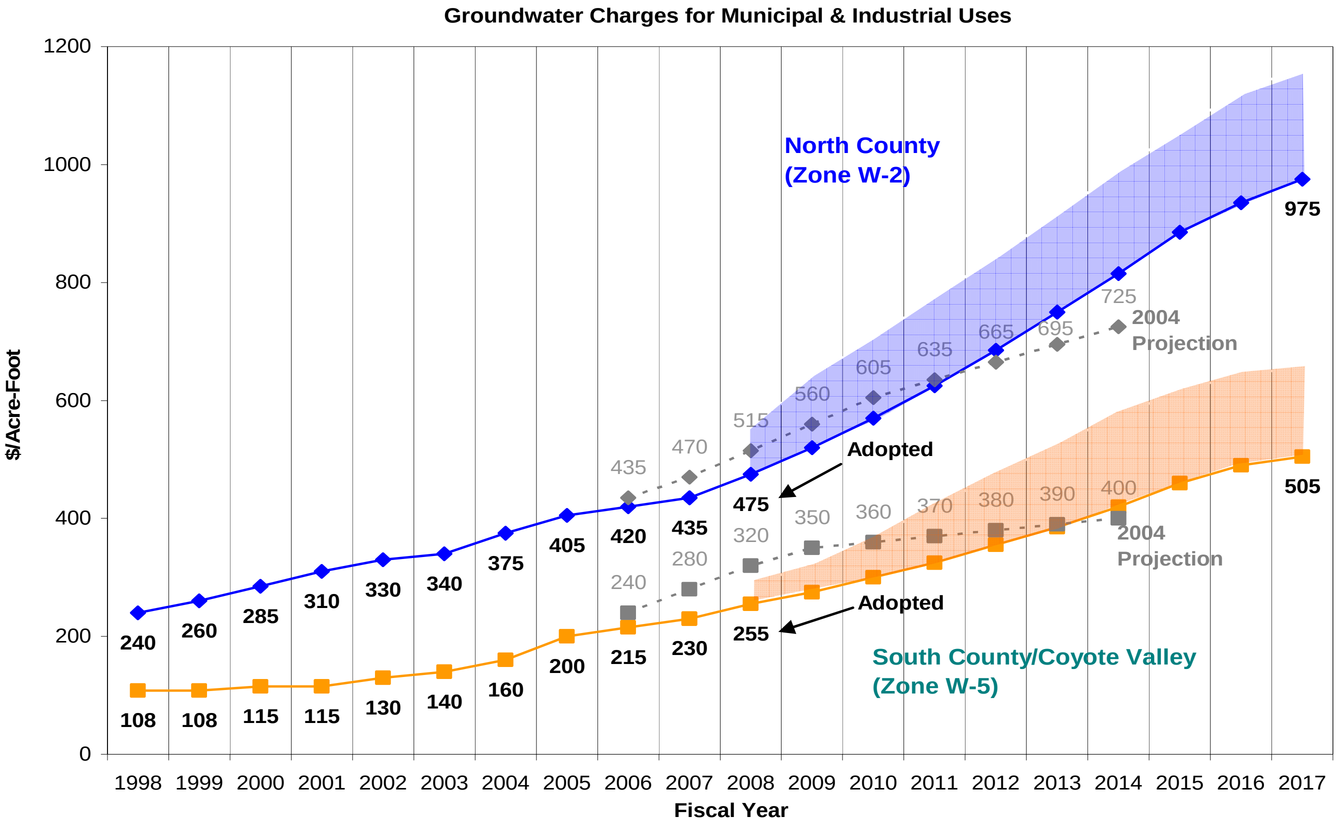
Staff did not recommend that the Board adopt a three year water charge intention this year due to future uncertainty, upward pressure on charges, and the need to do more collaboration with customers and partners.

TABLE 3-1
Summary of Water Charges
(Dollars Per Acre-Foot, $/AF)

	2004–05	2005–06	2006–07	Adopted 2007–08
Zone W-2 (North County)				
Groundwater Charge				
Municipal & Industrial	405.00	420.00	435.00	475.00
Agricultural	40.50	42.00	21.50	15.50
Net Agricultural (With Mobile Lab & INAAP Discounts)	34.50	34.50	14.00	15.50
Zone W-5 (South County/Coyote Valley)				
Groundwater Charge				
Municipal & Industrial	200.00	215.00	230.00	255.00
Agricultural	20.00	21.50	21.50	15.50
Net Agricultural (With Mobile Lab & INAAP Discounts)	14.00	14.00	14.00	15.50
Recycled Water Charges				
Municipal & Industrial	125.00	156.00	195.00	244.00
Agricultural	31.00	39.00	40.50	40.50
Zone W-2 (North County)				
Basic User Charge	405.00	420.00	435.00	475.00
Treated Water Surcharge				
Contract	90.00	90.00	100.00	100.00
Non-contract*	50.00	50.00	60.00	100.00
Total Treated Water Contract Charge	495.00	510.00	535.00	575.00
Total Treated Water Non-contract Charge	455.00	470.00	495.00	575.00

***** The non-contract surcharge discount was eliminated in FY 2007–08 since the incentive to offer the discount no longer exists and because of dry surface water conditions.

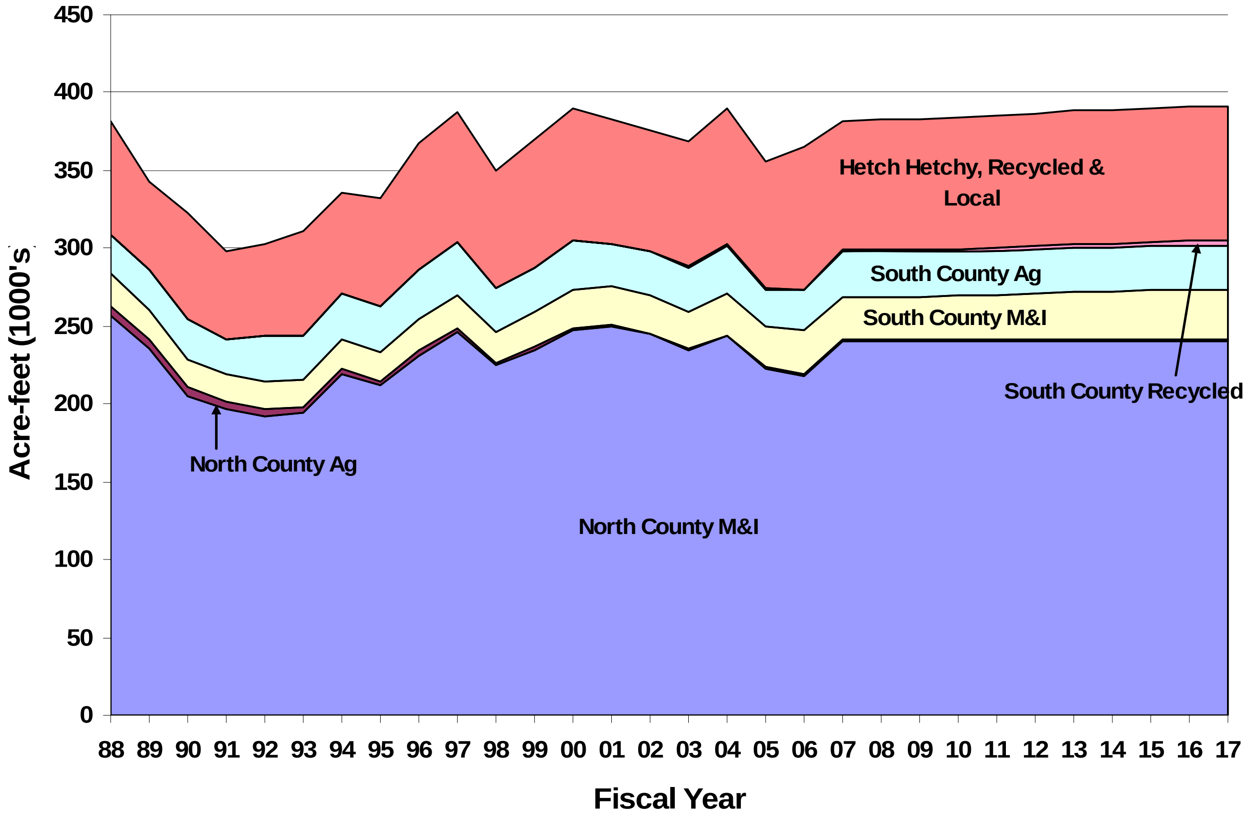
FIGURE 3-1
Ten-Year Water Charge Projection



Note: Impact of Coyote Valley Specific Plan not included

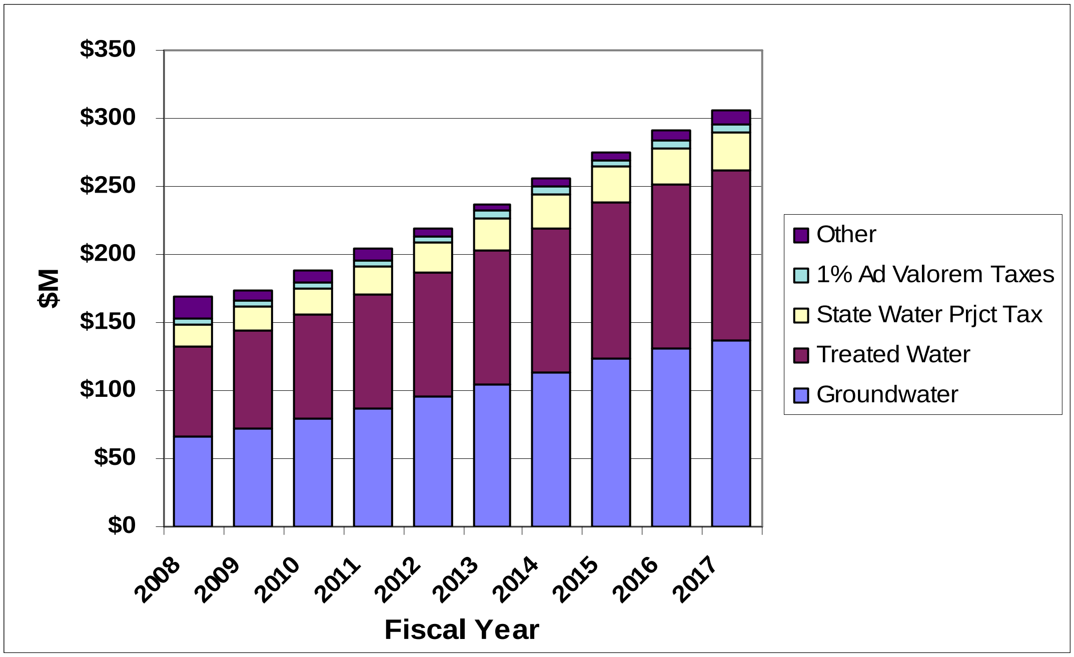
Figure 3-2 illustrates historical and projected water demand. The projected demand is based on the 2005 Urban Water Management Plan and assumes average weather conditions. The total District-managed demand projection including South County recycled water is relatively flat at roughly 300K AF per year, while total county demand is projected to be approximately 385K AF per year.

FIGURE 3-2
Historical and Projected Water Demand



Water Utility revenues are projected to increase from $169 million in FY 2007–08 to $306 million in FY 2016–17 as shown in Figure 3-3. The revenue projection is based on the low-end of the groundwater charge projection. Groundwater and treated water comprise the majority of water utility revenue and are projected to increase at just under 8 percent per year. The State Water Project (SWP) tax is projected to grow at roughly 6 percent per year in line with SWP imported water contract obligations. With the exception of the Gavilan tax in South County which is projected to increase at 6 percent per year due to the faster rate of development and growth in that part of the county, 1 percent ad valorem taxes are projected to increase at 3.6 percent per year. Other revenue includes surface water, recycled water, interest earnings, grants, capital reimbursements and other miscellaneous revenues.

FIGURE 3-3
Water Utility Revenue Forecast



REVIEW OF DISTRICT'S FINANCES FOR FISCAL YEARS 2005–06, 2006–07, AND 2007–08

The District uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements. Accounts related to activities of the Water Utility have been segregated into one fund. Revenue accounts include groundwater, treated water, property taxes, interest earnings, reimbursements, grants and other. Cost accounts include both direct and indirect costs associated water utility projects and activities. Within the Water Utility Fund, District staff track revenues and costs associated with the South County Zone separately so that the groundwater charge for services that benefit the South County Zone can be calculated.

The District's financial plans are designed to carry out the direction of the Board's Ends Policies on water supply and quality. The FY 2007–08 budget reflects an increase in overall spending while moving forward on efforts to maintain or upgrade the District's aging facilities to enable better operations under increasingly stringent public health and environmental requirements.

Table 3-2 shows the revenue requirements that are the basis for the adopted water charges, breaking out operations, water purchases, extraordinary items, and capital for fiscal years 2005–06 through 2007–08. The net requirements are the revenues that must be available from water sales, property taxes, and other sources after using debt financing and allowing for funds added to, or used from reserves. Reserves provide a balancing mechanism to smooth fluctuations in the level of revenue that must be raised from groundwater charges in a single year. Appendix B gives a description of each of the Water Utility Reserve Funds. Staff is currently proposing a revision to the reserve policy. A draft of this revision is also included in Appendix B.

TABLE 3-2
Overview of Water Utility Revenue Requirements
($ Millions)

Revenue Requirements	Actual 2005–06	Projected Yr-End 2006–07	Adopted Budget 2007–08
Operations	75.2	80.0	89.4
Debt Service	7.2	7.3	13.0
Water Purchases			
Federal Water	18.3	23.7	24.2
State Water	15.6	16.9	17.3
Extraordinary Items (Includes Advances, Repayments and Transfers)	0.5	0.5	8.1
Capital Projects	51.5	60.7	74.6
TOTAL REQUIREMENTS	**168.3**	**189.0**	**226.5**
Increase/(Decrease) in Reserves	36.1	(73.7)	107.2
Carryforward Reserves	(30.0)	42.9	(33.8)
Debt Proceeds	(37.0)	(5.6)	(131.3)
Net Requirements From Water Utility Revenues	**137.5**	**152.6**	**168.6**

Fiscal Year 2005–06

Total revenue for FY 2005–06 was $137.5 million, approximately $8 million less than projected last year due to lower water demand caused by a wet spring and lower reimbursement revenues than expected. The revenue shortfall was offset by lower spending on operations.

During FY 2005–06, significant operating outlays totaling $32.7 million were made in the following continuing programs:

- $4.7 million for efforts in the Water Conservation Program
- $3.5 million for water recycling studies, planning, and financial incentives
- $6.0 million for recharge and raw water operations and field facility maintenance
- $12.8 million for General Operations at the three treatment plants
- $2.8 million for Water District laboratory to ensure drinking water quality
- $2.9 million for groundwater quality and supply management

Table 3-2 shows extraordinary items which represent transfers out of $0.2 million for compensated absences (includes sick leave and vacation) and $0.3 million for a reservoir treatment pilot program. Water purchases totaled $33.9 million and capital projects totaled $51.5 million in FY 2005–06. Reserves increased by approximately $36.1 million primarily due to timing issues related to accounting for capital project budget carry-forward and encumbrances.

Fiscal Year 2006–07

Operations requirements for FY 2006–07 are estimated to increase by $4.8 million over actual requirements for FY 2005–06. Capital appropriations for this fiscal year total $60.7 million. A large share of this cost, $20.2 million, is for the Almaden Campus Water Quality Lab. Approximately $7.3 million is for further design and construction efforts at the water treatment plants.

Table 3-2 shows that an estimated $5.6 million will come from debt to fund the capital expenditures for FY 2006–07.

Revenue for FY 2006–07 is estimated to come in at $152.6 million.

Fiscal Year 2007–08

For FY 2007–08, the estimated operations costs are expected to be $9.4 million more than FY 2006–07. The annual operating expenditures are budgeted to increase in FY 2007–08 due to the cost of inflation, additional pipeline inspection and maintenance work, and to address a backlog in data management. The cost of water purchased from the federal and state projects continues to be the largest expense item at $24.2 million and $17.3 million, respectively. The combined water purchase costs increased by $0.9 million over the prior year.

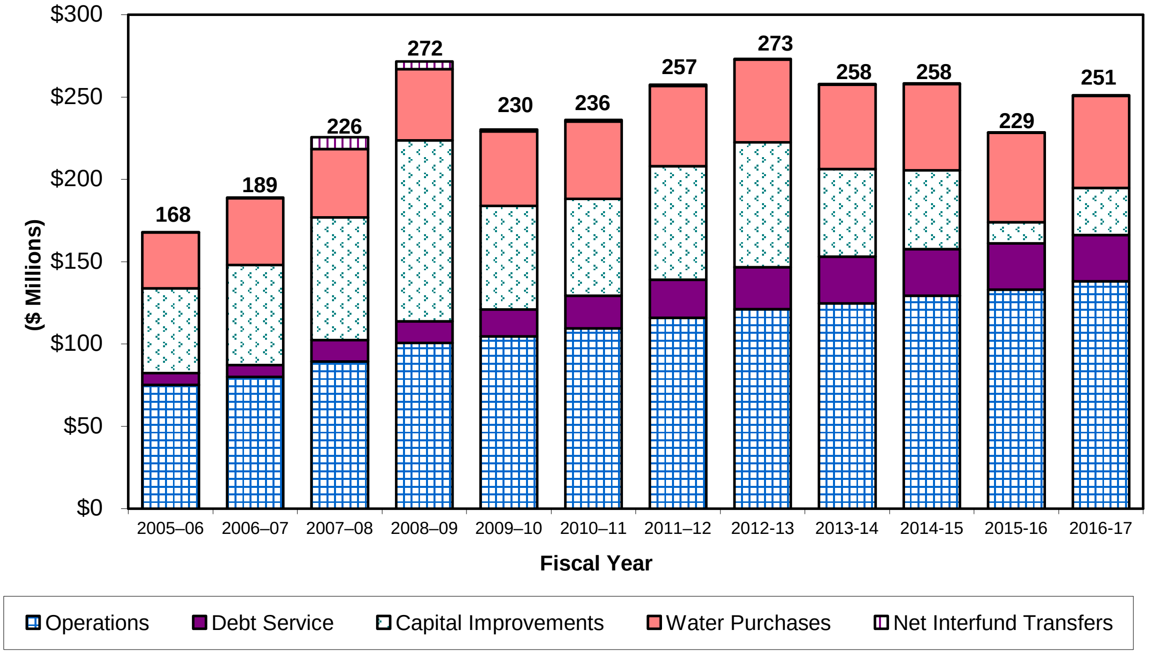
In FY 2007–08, the capital appropriation is estimated to be $74.6 million. A substantial portion of this estimate is for the modification of the Lenihan Dam outlet structure, construction of the Almaden Campus Water Quality Lab, and improvements at the water treatment plants.

For FY 2007–08, Table 3-2 shows total requirements of $226.5 million to be met from a combination of current revenues, reserves, and debt. The adopted water charges shown in Table 3-1 will generate approximately $133.63 million in revenues from water usage. Property taxes are projected to be $21.63 million; and interest earnings, capital reimbursements and other revenue are estimated to be $13.3 million for total revenues of $168.6 million. The table shows a net increase in reserves of $107.2 million.

OVERVIEW OF LONG-TERM CAPITAL AND OPERATING PLANS

To develop a water charge structure that will support planned work, staff analyzes the immediate needs of the District as well as anticipated requirements in the years to come. The projected outlays for the next ten years (see Figure 3-4) include capital and operating costs for the water quality and water supply issues discussed in Section 2. The continuing appropriations for the capital investment needed to comply with water quality regulations can be seen in the capital portion of the bars. The majority of capital projects slotted for the near future is related to asset management to replace aging equipment and facilities, and infrastructure reliability to protect the county's baseline water supply. A detailed listing of funded capital improvement projects is in Table 2-1.

FIGURE 3-4
Water Enterprise
Ten-Year Program—Projected Uses of Funds



Operations costs are projected to increase at an average of 5.6 percent per year over the next ten years, driven mainly by inflation. Annual debt service is projected to increase by $15 million between FY 2007–08 and FY 2016–17, due to debt financing of the capital improvement program.

LONG-TERM FUNDING APPROACH FOR THE WATER UTILITY

The financial plan for the next ten years combines the commercial paper program with projected revenues, periodic debt issuances, reserves, and other sources to satisfy total expenses each year. A major challenge is to provide $603 million (in inflated dollars) for capital facilities and equipment between fiscal years 2007–08 and 2016–17; therefore, short-term and long-term debt financing is planned each year.

Table 3-3 shows the funding sources for capital projects in fiscal years 2006–07 through 2011–12.

TABLE 3-3
Capital Improvement Projects Funding Sources Fiscal Years 2006–07 Through 2011–12 (Millions of Dollars)

Water Utility Capital Improvement Projects $ Millions	06/07 Projected Yr-End	07/08 Adopted Budget	08/09 Projection	09/10 Projection	10/11 Projection	11/12 Projection
Funding Sources						
Current Revenue (i.e., operating income, operating reserves, and transfers)	23.5	15.6	10.9	19.8	26.2	29.1
Future Year's Capital Reserves	43.4	-75.0	65.8	-6.0	4.8	-4.2
Current Authorized Project Reserve	-11.8	2.7	9.1			
Debt Proceeds	5.6	131.3	24.0	49.2	27.8	44.1
Total Water Utility Capital Improvements Funded (Inflated Dollars)	**60.7**	**74.6**	**109.8**	**63.0**	**58.8**	**69.0**

Table 3-4 shows the lower priority or deferred capital projects that are not funded under the adopted charges for FY 2007–08 and the corresponding low end of the groundwater charge projection. The postponed capital projects total approximately $580 million (inflated) over the next ten years. The upper bound of Figure 3-1 illustrates the required water charge projection necessary to fund the postponed capital projects.

Assuming that the Board adopts future groundwater charges along the trajectory shown in Figure 3-1, the capital projects identified by staff as “low priority” as well as the following higher priority projects would remain unfunded:

- San Luis Lowpoint Solution placeholder ($118M)
- Dam Rehabilitation placeholder ($150M)
- Construct well fields on the east and west sides of the system as part of the Water Infrastructure Reliability Program – Portfolio 2 ($153.8M)
- Construct Advanced Recycled Water Treatment Plant – Coyote Valley ($25.4M)
- Construct Diversion to Maximize Recharge Capability at Church Avenue ($3.8M)
- Madrone Avenue Pipeline Rehabilitation ($7.4M)
- Construct New South County Recharge Ponds ($39.6M)
- Long Term South County Recycled Water Facility Expansion Project ($9.4M)

The first two “placeholder” projects are unfunded because time and further analysis is necessary to define the costs. The well field construction portion of the Infrastructure Reliability Program is unfunded because the District has not reached agreement with retail partners as to the necessity of these investments. The Advanced Recycled Water Treatment Plant, which benefits Coyote Valley, is unfunded because the Coyote Valley Specific Plan has not yet been adopted by the City of San Jose and further planning and analysis is necessary to define new water supply infrastructure needs. The remaining projects, which all benefit South County are unfunded because further planning and communication is necessary to better understand customer and partner needs and expectations related to water supply reliability and financing. The District anticipates that the South County Water Supply Master Plan project, which is a collaborative effort between the District, the County of Santa Clara and the cities of Gilroy and Morgan Hill, will help achieve that understanding.

While the adopted increase in groundwater charges is larger than in the past two years, given the pace of construction cost inflation it makes financial sense to construct necessary capital projects earlier rather than to continue to postpone them. This year’s increase will help fund several projects that were not funded last year including the repair and rehabilitation of the Almaden Calero Canal; the District’s portion of an investment in a Recycled Water Advanced Treatment Facility in partnership with the City of San Jose; the short term expansion project of the South County Recycled Water System; and several components of the Water Infrastructure Reliability Program, which is a series of projects that would reduce the water service outage period after an earthquake or other disaster.

TABLE 3-4
List of Capital Projects Postponed Indefinitely
($ in Thousands, Inflated)

Job	FY06 Actuals	FY07 Projected Year-End	FY08 Adopted Budget	FY09 Projection	FY10 Projection	FY11 Projection	FY12 Projection	FY 13-17 Projection
SOURCE OF SUPPLY								
Anderson Reservoir Bank Erosion Repair*	-	-	-	550	2,943	2,605	-	-
Dam Rehabilitation Placeholder*	-	-	-	-	-	-	-	150,000
Guadalupe Dam Outlet Works Rehabilitation	-	-	-	269	640	720	5,302	-
Calero Dam Outlet Works Rehabilitation	-	-	-	157	525	395	3,888	-
San Luis Lowpoint Solution*	-	-	-	-	-	28,138	28,982	60,598
IRP2 East-side Well Field	-	-	-	-	1,194	1,784	11,296	103,167
IRP2 West-side Well Field	-	-	-	-	504	1,080	1,040	33,772
Recycled Water Masterplan - Long Term*	-	-	-	-	-	9,330	116	-
Advanced Treatment Plant - Coyote Valley	-	-	-	1,697	219	2,251	9,866	11,372
Source of Supply Subtotal	**-**	**-**	**-**	**2,673**	**6,025**	**46,303**	**60,490**	**358,909**
RAW WATER TRANSMISSION & DISTRIBUTION								
Valve 906 Low Flow Bypass	-	-	-	145	-	-	-	-
San Felipe Pipeline Upgrade*	-	-	-	-	-	-	505	10,653
SC Tunnel Leakage & Pacheco Conduit Bifurcation Dewater*	-	-	-	-	-	-	507	3,169
Church Ave Diversion*	-	-	-	1,667	2,072	56	-	-
Coyote PP Adj Speed Drive Replacement	-	-	-	738	512	2,892	2,725	2,639
So Cnty Recharge Ponds*	-	-	-	-	-	-	1,433	38,171
Madrone Avenue Pipeline*	-	-	-	1,778	5,661	-	-	-
Raw Water Transmission & Distribution Subtotal	**-**	**-**	**-**	**4,328**	**8,245**	**2,948**	**5,170**	**54,632**
WATER TREATMENT								-
RWTP Waste Stream Separation	1	-	-	-	-	116	119	498
Treatment Plant Filter Backwash Aid	-	-	-	195	233	938	761	-
TP Electrical and Control Systems Improvement	-	-	-	321	254	1,405	383	-
Water Treatment Subtotal	**1**	**-**	**-**	**516**	**487**	**2,459**	**1,263**	**498**
TREATED WATER TRANSMISSION & DISTRIBUTION								
Milpitas PL Terminus Valve & Vault	-	-	-	209	165	1,135	264	-
Treated Water Air Valve Replacement	-	-	-	1,590	820	4,954	4,747	9,601
Treated Water Transmission & Distribution Subtotal	**-**	**-**	**-**	**1,799**	**985**	**6,089**	**5,011**	**9,601**
ADMINISTRATION & GENERAL								
ISMP Electronic Document Management System	-	-	-	965	665	-	-	-
Administration & General Subtotal	**-**	**-**	**-**	**965**	**665**	**-**	**-**	**-**
TOTAL	**1**	**-**	**-**	**10,281**	**16,407**	**57,799**	**71,934**	**423,640**

Note: The asterisked projects would benefit the South County/Coyote Valley and therefore would be funded in part or in whole by the South County/Coyote Valley.

Table 3-5 shows the projected revenues, expenditures, and reserves over the next ten years. By financing with a combination of debt, current year revenue, and reserves, the District is able to meet its capital investment plan. However, reserve funds for the purpose of water charge stabilization are projected to remain significantly depleted. The financial model under the low case continues to assume that average discretionary reserve levels are maintained below the minimum identified in a recent staff analysis.

Financing and Bond Ratings

In 2006, the Water Utility refunded approximately $55 million of outstanding Series 2000 Water Utility System Revenue Bonds and $40 million of outstanding Commercial Paper Certificates. Ultimately, this effort saved the District $3.6 million of interest costs in terms of net present value.

The FY 2007-08 adopted budget includes a planned long term debt issuance of $131 million to fund capital appropriations over the next three years. Capital improvement needs total $603 million (in inflated dollars) for the ten fiscal years 2007-08 through 2016-17. As shown in Figure 3-5, the District will see debt service rise from $13 million in FY 2007-08 to just over $28 million in FY 2016-17 as a result of periodic debt issuances to fund capital. Total outstanding debt (excluding general obligation bonds) is shown in Figure 3-6 and is projected to increase from $232 million in FY 2007-08 to $405 million in FY 2016-17. This outstanding debt could be significantly higher if all programs identified under the higher range were funded.

The District received ratings of Aa3 and AA from Moody's and Standard & Poor's respectively on the 2006 refunding of its outstanding Series 2000 Water Utility System Revenue Bonds and commercial paper program. The District was upgraded to a rating of Aa2 from Moody's for the FY 2007-08 long term debt issuance. These ratings reflect the District's strong financial position and the highly rated creditworthiness of District issued securities. The ratings are among the highest for a water-related governmental entity in the state of California, which helps keep interest costs borne by the District at a minimum.

TABLE 3-5
Ten-Year Water Utility Plan - ($ in Thousands)

	Actual	Projected Year End	Adopted Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
	2005–06	2006–07	2007–08	2008–09	2009–2010	2010–11	2011–12	2012-13	2013-14	2014-15	2015-16	2016-17
Operating Revenues												
Groundwater Charges	$40,675	$47,300	$65,563	$71,653	$78,781	$86,591	$95,223	$104,526	$113,638	$123,987	$131,127	$136,536
Surface & Recycled Water Charges	$720	$1,217	$1,373	$1,576	$1,821	$2,044	$2,240	$2,423	$2,607	$2,804	$2,957	$3,042
Treated Water Charges	$66,614	$75,200	$66,689	$71,908	$77,707	$84,086	$91,044	$98,583	$106,122	$114,240	$120,039	$124,679
Inter-governmental Services	$1,269	$2,000	$2,417	$903	$933	$1,060	$996	$1,117	$1,002	$1,025	$1,034	$1,253
Total Operating Revenue	**$109,278**	**$125,717**	**$136,042**	**$146,040**	**$159,242**	**$173,781**	**$189,503**	**$206,649**	**$223,369**	**$242,056**	**$255,157**	**$265,510**
Non-Operating Revenues												
Property Taxes	$19,338	$20,958	$21,633	$22,790	$23,775	$25,950	$27,006	$28,779	$29,977	$31,184	$32,399	$34,624
Interest	$4,296	$4,541	$4,550	$2,373	$1,651	$1,697	$1,718	$1,782	$1,779	$2,259	$3,790	$5,863
Capital Contributions	$1,408	$522	$1,505	$3,088	$2,942	$2,750	$0	$0	$0	$0	$0	$0
Other	$3,222	$909	$4,826	$327	$328	$330	$331	$333	$334	$336	$337	$339
Total Non-Operating Revenues	$28,264	$26,930	$32,514	$28,578	$28,696	$30,726	$29,055	$30,894	$32,090	$33,778	$36,527	$40,827
Total Revenue	**$137,542**	**$152,647**	**$168,556**	**$174,618**	**$187,938**	**$204,507**	**$218,558**	**$237,543**	**$255,459**	**$275,834**	**$291,684**	**$306,337**
Operating Outlays												
Operations	$105,978	$116,000	$128,106	$132,669	$138,012	$143,964	$150,505	$156,893	$161,327	$166,262	$172,570	$179,187
Operating Projects	$3,154	$4,500	$2,791	$11,434	$11,779	$12,716	$14,213	$14,484	$14,760	$15,650	$14,739	$14,831
Debt Service	$7,187	$7,300	$12,952	$13,135	$16,325	$19,698	$22,961	$25,397	$28,224	$28,223	$28,228	$28,215
Total Operating Outlays	$116,319	$127,800	$143,848	$157,238	$166,116	$176,378	$187,678	$196,775	$204,311	$210,134	$215,537	$222,233
Excess (Deficit) Revenues vs Operating Outlays	**$21,224**	**$24,847**	**$24,708**	**$17,380**	**$21,822**	**$28,129**	**$30,879**	**$40,769**	**$51,148**	**$65,700**	**$76,147**	**$84,103**
Balance Available for Capital and Reserves	**$21,224**	**$24,847**	**$24,708**	**$17,380**	**$21,822**	**$28,129**	**$30,879**	**$40,769**	**$51,148**	**$65,700**	**$76,147**	**$84,103**
Total Capital Appropriations	**$51,450**	**$60,731**	**$74,575**	**$109,829**	**$62,968**	**$58,849**	**$69,012**	**$76,072**	**$53,245**	**$47,780**	**$12,717**	**$28,431**
Other Financing Sources/ (Uses):												
Transfer Out - ISMP	$0	$0	($778)	($271)	$0	$0	$0	$0	$0	$0	$0	$0
Transfer Out - Other	($300)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Transfer out - comp absences	($187)	($318)	($318)	($318)	($318)	($318)	($318)	($318)	($318)	($318)	($318)	($318)
Transfer out - Almaden Campus	$0	$0	($902)	($3,668)	($167)	$0	$0	$0	$0	$0	$0	$0
Transfer out - FAHCE	$0	($150)	($309)	$0	($128)	$0	$0	$0	$0	$0	$0	$0
Transfer out - Strategic Initiatives	$0	$0	($3,228)	$0	$0	$0	$0	$0	$0	$0	$0	$0
Transfer out - Consolidation			($1,042)	$0	$0	$0	$0	$0	$0	$0	$0	$0
Transfer out - Customer Relation			($697)	$0	$0	$0	$0	$0	$0	$0	$0	$0
Transfer out - Microwave Comm			($537)	($556)	($587)	($620)	($408)	$0	$0	$0	$0	$0
Transfer out - Radio Repeater	$0	$0	($267)	$0	$0	$0	$0	$0	$0	$0	$0	$0
Revenue Bond/CP Proceeds	$36,952	$0	$130,575	$24,022	$49,190	$27,851	$44,075	$34,722	$3,097	$13,677	$7,749	$12,019
State Revolving Fund Loan		$5,576	$774									
Total Other Financing Sources/ (Uses)	**$36,464**	**$5,108**	**$123,271**	**$19,209**	**$47,990**	**$26,913**	**$43,349**	**$34,404**	**$2,779**	**$13,359**	**$7,431**	**$11,701**
Balance Avaliable	**6,238**	**(30,776)**	**73,404**	**(73,240)**	**6,845**	**(3,807)**	**5,216**	**(900)**	**683**	**31,279**	**70,861**	**67,374**
Reserves:												
Operating Reserves:												
Contingency Appropriation	$1,232	$1,325	$1,438	$1,572	$1,661	$1,764	$1,877	$1,968	$2,043	$2,101	$2,155	$2,222
Working Capital Appropriation	$10,265	$11,044	$11,987	$13,103	$13,843	$14,698	$15,640	$16,398	$17,026	$17,511	$17,961	$18,519
Supplemental Water Supply Appropo.	$589	$589	$589	$589	$589	$589	$589	$589	$589	$589	$589	$589
Rate Stablization Reserve Fund	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
San Felipe Appropriation	$3,339	$3,304	$3,304	$3,304	$3,304	$3,304	$3,304	$3,304	$3,304	$3,304	$3,304	$3,304
Environmental Water Account	$921	$921	$921	$921	$921	$921	$921	$921	$921	$921	$921	$921
Operating	$19,345	$20,183	$21,240	$22,489	$23,318	$24,276	$25,331	$26,180	$26,883	$27,426	$27,931	$28,556
Capital Reserves:												
Designated for Fixed Assets	$3,418	$3,418	$3,418	$3,418	$3,418	$3,418	$3,418	$3,418	$3,418	$3,418	$3,418	$3,418
Designated for Restricted Purposes	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5
Designated for Future Years' Capital	$43,403	($31,157)	$75,003	$9,246	$15,262	$10,497	$14,658	$12,909	$12,889	$43,624	$113,980	$180,729
Currently Authorized Projects	$0	$42,946	$9,134	$0	$0	$0	$0	$0	$0	$0	$0	$0
Capital	$46,826	$15,212	$87,559	$12,668	$18,684	$13,920	$18,081	$16,332	$16,311	$47,047	$117,403	$184,152
Reserves for Contingent Liabilities:												
State Revolving Fund			$0	$401	$401	$401	$401	$401	$401	$401	$401	$401
Bureau Repayment Appropriation	$16,066	$16,066	$16,066	$16,066	$16,066	$16,066	$16,066	$16,066	$16,066	$16,066	$16,066	$16,066
Contingent Liabilities	$16,066	$16,066	$16,066	$16,467	$16,467	$16,467	$16,467	$16,467	$16,467	$16,467	$16,467	$16,467
Total	$82,237	$51,461	$124,865	$51,625	$58,469	$54,662	$59,878	$58,978	$59,661	$90,940	$161,801	$229,174
Debt Service Coverage												
Sub. Lien Debt Service Coverage	2.77	5.52	2.46	2.19	2.23	2.35	2.39	2.62	2.83	3.34	3.71	4.00

FIGURE 3-5
Projected Debt Service

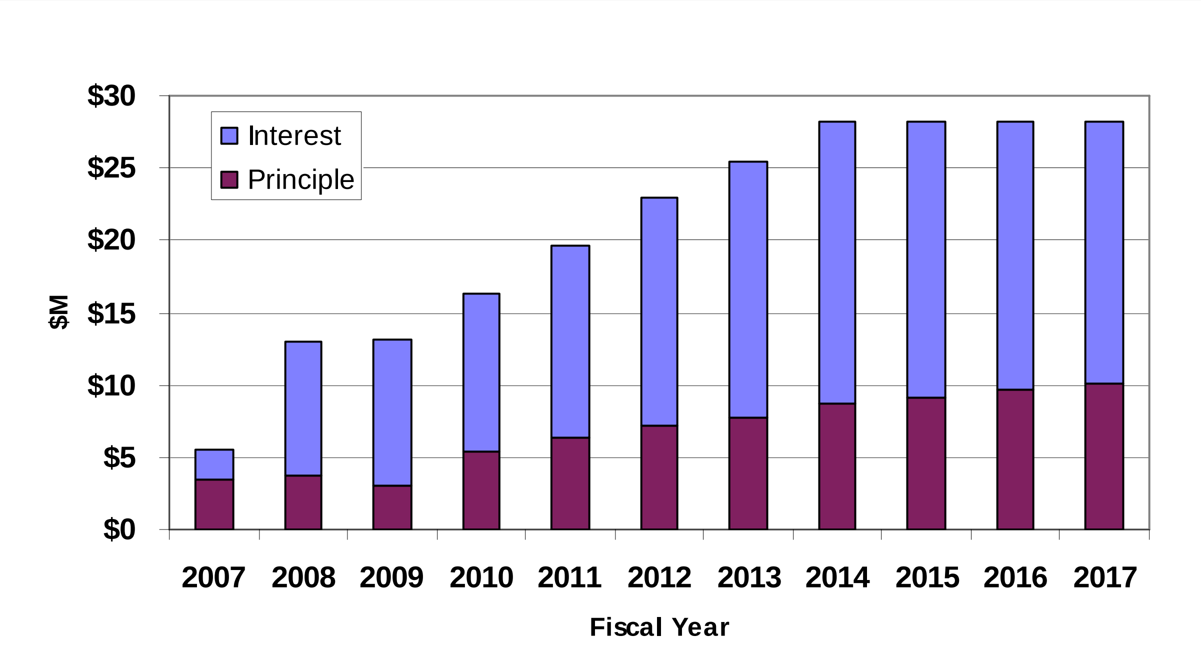
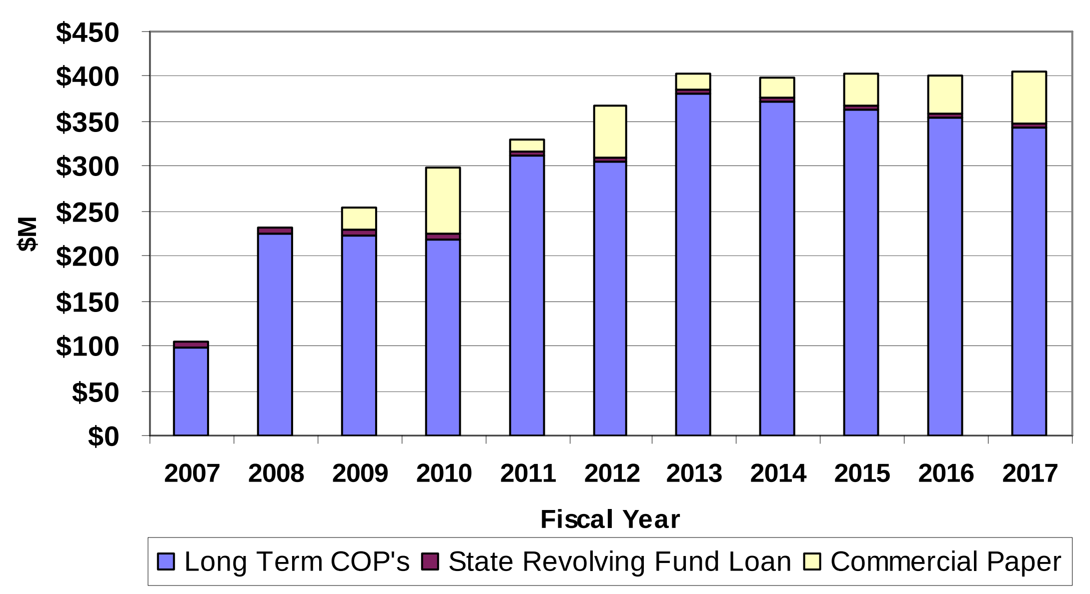


FIGURE 3-6
Projected Outstanding Debt



NORTH COUNTY (ZONE W-2) FINANCES

North County (Zone W-2) is generally defined as the portion of the county north of Metcalf Road. North County (Water Charge Zone W-2) accounts for approximately 80 percent of District water consumption, but because of higher water charges due to higher North County costs, over 95 percent of the Water Utility's revenue. As shown in Table 3-1, the Board adopted a $475/AF groundwater charge for non-agricultural (M&I) water and $575/AF for contract treated water for FY 2007–08. This is an increase of 9.2 percent for groundwater and 7.5 percent for treated water compared to FY 2006–07. The adopted charge increase translates to an increase of $1.38 per month for the typical residence using either 1500 cubic feet of groundwater or treated water per month. Customers in most instances may experience charge increases enacted by their retail water provider in addition to those from the District.

The Board reduced the North County agricultural charges from $21.50/AF in FY 2006–07 to $15.50/AF in FY 2007–08 and increased the open space credit, which is funded by the 1% ad valorem property tax revenues from the corresponding zone of benefit, to offset lost revenue. The resulting agricultural charge is 3.3 percent of the M&I charge in North County.

The Board maintained the surcharge on treated water delivered under the contracts with retail agencies at $100 per AF. As outlined in treated water contracts, the District has the discretion to make available treated water in excess of the retailers' basic contract amounts, so-called non-contract treated water, "… at such times and such prices as determined by the District." The availability of non-contract deliveries will be suspended when necessary to accommodate construction activities scheduled for Rinconada Water Treatment Plant (RWTP). For FY 2007-08, the Board supported staff's recommendation to eliminate the discounted surcharge on non-contract water from RWTP and price the non-contract treated water surcharge at $100/AF for all three treatment plants. The rationale is that the unfavorable westside basin groundwater conditions that existed in 1998, which caused the District to offer the discounted non-contract surcharge incentive from RWTP, no longer exist. The amount of the surcharge on both contract and non-contract water affects the retailers' decisions on whether to pump groundwater or purchase treated water. The net impact of retailers taking groundwater in lieu of treated water is a revenue loss of roughly $800K per year (net of variable cost savings on a shift of 20,000 AF) and equates to approximately $3/AF in terms of the groundwater charge, which is factored into the adopted water charge. Non-contract water will be offered to all treated water contractors to the extent that it is available. However, given the dry surface water conditions and concerns over non-contract water pricing, District staff is planning further analysis and discussion with retailers regarding non-contract treated water pricing and availability.

Table 3-6 shows that total North County costs in FY 2007–08 are budgeted to increase by approximately $37.2 million compared to the projected expenditures in FY 2006–07. This increase is driven by an increase in operating expenditures as well as a reappropriation of prior year's capital unspent budget. The projected shortfall in FY 2006-07 occurred due to delaying debt issuance until FY 2007–08.

Appropriations for Lenihan Dam Outlet Modifications, Almaden Campus Water Quality Lab, and various treatment plant upgrades comprise the bulk of the capital improvement costs for FY 2007–08. The aforementioned issuance of long-term debt planned in FY 2007–08 is to finance the capital program for the next three years.

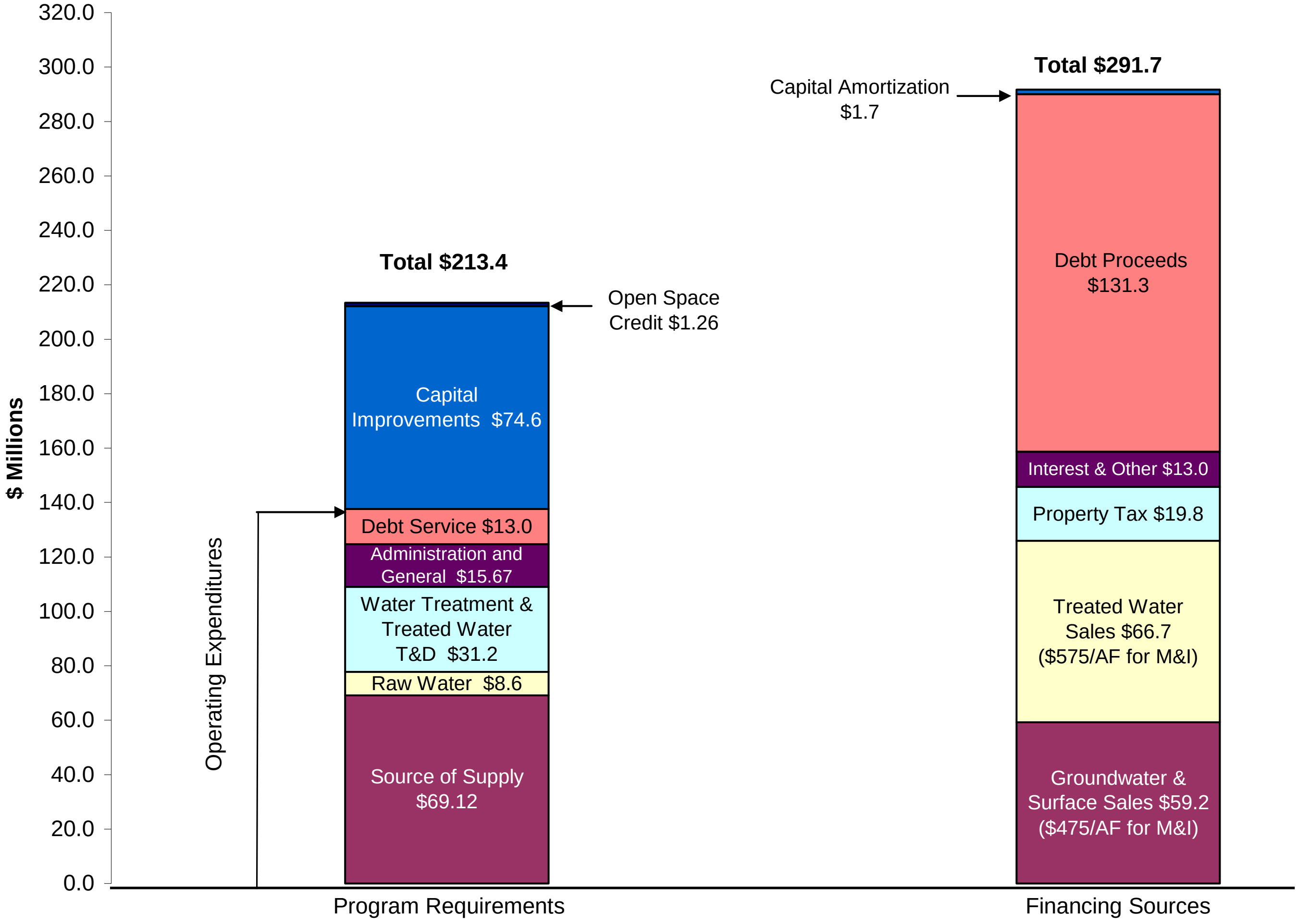
Operations costs are budgeted to increase by $22.0 million from the prior year expenditures driven by the cost of inflation and critical maintenance needs. Federal and state imported water payments are projected to increase slightly.

TABLE 3-6
Overview of North County Finances
($ Millions)

	Actual 2005–06	Projected Year-End 2006–07	Adopted Budget 2007–08
Allocated Revenue			
Operating & Non-operating Revenue	$129.58	$141.61	$158.70
Long Term Debt/Other Debt Financing	$36.95	$5.58	$131.35
Capital Amortization from South Co./Coyote Valley	$1.22	$1.42	$1.69
Carryforward Reserves	$31.10	($11.10)	
Total Allocated Revenue	**$198.85**	**$137.51**	**$291.73**
Allocated Costs			
Operation	$73.97	$76.38	$98.40
Imported Water	$32.06	$38.16	$39.19
Capital Improvements	$51.45	$60.73	$74.58
Less Open Space Credit to South/Coyote AG	$0.85	$0.94	$1.26
Total Allocated Costs	**$158.32**	**$176.21**	**$213.43**
North County Surplus (Shortfall)	$40.52	($38.70)	$78.31

Figure 3-7 shows the relationship between expenditures and the sources of revenue in Zone W-2. The groundwater charges for FY 2007–08 are necessary to conduct “district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this state” (District Act, Section 26.3).

FIGURE 3-7
Fiscal Year 2007–08
North County Water Utility Program Requirements and Financing Sources
($ Millions)



*T&D = Transmission and Distribution

SOUTH COUNTY/COYOTE VALLEY (ZONE W-5) FINANCES

South County/Coyote Valley (Zone W-5) is generally defined as the portion of Santa Clara County south of Metcalf Road, including Coyote Valley, Morgan Hill, San Martin and Gilroy. Charges in the South County/Coyote Valley (Water Charge Zone W-5) are based on the costs of specific facilities, imported water costs, and operations costs related to managing the groundwater basin, ensuring water quality, and measuring water supplies and usage. Under current policies for managing the finances of South County/Coyote Valley, water charges are set to maintain an approximate balance between revenues and costs. The cumulative balance is tracked, and historically projected water charges have been set to keep the cumulative balance near zero, while maintaining relative stability in South County/Coyote Valley water charges. Successive years of surplus or shortfall can occur, but charges are adjusted only when the trend in the cumulative surplus or shortfall shows a significant imbalance.

For South County/Coyote Valley, the Board adopted a $255/AF groundwater charge for M&I water a 10.9 percent increase over prior year, and $15.50/AF for agricultural water. The increase translates to an increase of $0.86 per month for the typical residence using 1500 cubic feet of groundwater per month. Customers in most instances will experience water charge increases enacted by their retail water provider in addition to those from the District. With the adopted charges for FY 2007–08, costs are estimated to exceed revenues by approximately $1.6 million in FY 2007–08 (see Table 3-7). On a cumulative basis, costs are estimated to exceed revenues by $0.2 million at the end of FY 2007–08 not including the costs of the perchlorate response program. Figure 3-8 shows the projected cumulative revenue shortfall under the adopted water charge projection for South County/Coyote Valley. Under this projection, cumulative costs will exceed cumulative revenues and will not be balanced until FY 2014–15. The projection assumes an average increase of 8.2 percent between FY 2006–07 and FY 2016–17. The average increase under the higher projection is 11.0 percent, in the same time frame.

The revenue shortfall, which began in FY 2002–03 was initially driven by investments in recycled water and conservation. In subsequent years, cost increases were driven by program enhancements including increased water supply planning and collaboration efforts, installation and operation of more wells to monitor groundwater levels and quality, development of computer models for the groundwater basins, increased efforts to resolve solvents cases, initiation of an asset management program, more maintenance work on San Felipe Division facilities and raw water pipelines, and improved security. More recently, increases in imported water contract rates and loss of property tax revenue have exacerbated the revenue shortfall.

In 2003, the District initiated an aggressive strategy to respond to the perchlorate contamination found in the Llagas Subbasin. The District has funded perchlorate-related costs from Water Utility reserves and federal grants as opposed to groundwater charges. Staff has tracked the costs of the perchlorate response program separately and has requested full reimbursement from the responsible party. If the District is not successful in obtaining full reimbursement, the cumulative revenue shortfall in South County/Coyote Valley would worsen. Staff continues to work on plans with customers and partners in the region to take advantage of federal and state grant opportunities to fund projects that would help restore the groundwater basin.

Current Board policy adds an “open space” credit to agricultural revenues. The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural groundwater charges low. The credit to agricultural water users in a water charge zone amounts to the difference in revenue from agricultural water use charged at 10 percent of the zone’s M&I charge and that which would be generated if the agricultural charge were 25 percent of the zone’s M&I charge. The credit is funded by 1% ad valorem property tax revenues from the corresponding zone of benefit. A Board policy setting the agricultural water charge at one-tenth of the zone’s M&I charge was instituted in July 1998 and formally incorporated into the pricing policy in Resolution No. 99-21 (see Appendix B). Both this year and last year, the Board increased the open space credit in order to minimize the increase in the agricultural groundwater charge.. The Board reduced the agricultural groundwater charge from $21.50/AF to $15.50/AF in both zones for FY 2007-08 and increased the open space credit again to offset the lost revenue. The adopted agricultural charge is 6.1 percent of the M&I charge in South County and 3.3 percent in North County.

As shown in Table 3-7, the Open Space Credit received by the South County/Coyote Valley was $0.85 million in FY 2005–06, estimated at $0.94 million in FY 2006–07, and budgeted to be $1.3 million in FY 2007–08. As the M&I charges for both zones are projected to grow over the next ten years, the amount of the Open Space Credit available to support agricultural water revenues will continue to increase.

The Board eliminated the discount on the agricultural groundwater charge that is currently offered to growers who participate in the District's Mobile Lab and In-field Nutrient Assessment Assistance Programs (INAAP). The original rationale for the discount was to provide an incentive to growers to implement best management practices to improve water use efficiency and reduce nitrate loading to the groundwater basin. However, current Regional Water Quality Control Board regulations and the Ag Waiver Program, require growers to develop Farm Water Quality Plans for meeting the same goals of reducing runoff and nitrate loading. Thus, the District's incentive is now redundant. As shown in Table 3-1, the net agricultural groundwater charge for eligible growers who participate in both programs increased from $14.00 per AF to $15.50 per AF.

The District has entered into an agreement with the Farm Bureau to help growers develop their Farm Water Quality Plans, and is working with the Farm Bureau on developing a low-cost program for assisting growers with Plan implementation. In addition, as part of the District's collaboration on the Pajaro River Watershed Integrated Regional Water Management Plan, staff is looking at developing a revised Regional Ag Mobile Lab. Lastly, staff is continuing to look at grant funding opportunities to fund these types of programs.

Figure 3-9 shows the relationship between expenditures and budgeted sources of revenue in South County/Coyote Valley (Zone W-5) for FY 2007–08. The groundwater charges adopted for FY 2007–08 in Zone W-5 are necessary to conduct "District activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this state" (District Act, Section 26.3).

TABLE 3-7
Overview of South County/Coyote Valley Finances
($ Millions)

	Actual 2005-06	Projected Year-End 2006-07	Adopted Budget 2007-08
Allocated Revenue			
Operating & Non-operating Revenue	$7.96	$10.29	$9.86
Received Open Space Credit from North County	$0.85	$0.94	$1.26
Total Allocated Revenue	**$8.81**	**$11.23**	**$11.12**
Allocated Costs			
Operation	$7.26	$6.35	$8.79
Imported Water	$1.89	$2.39	$2.32
Amortized Capital Improvements	$1.22	$1.42	$1.69
Interest (earned)/due Utility Reserves	($0.03)	($0.03)	($0.02)
Total Allocated Cost	**$10.33**	**$10.13**	**$12.77**
Surplus (Shortfall)	**($1.52)**	**$1.10**	**($1.65)**
Cumulative Balance	$0.34	$1.44	($0.21)

FIGURE 3-8
South County/Coyote Valley Cumulative Revenue Surplus/Shortfall Projection
($ Thousands)

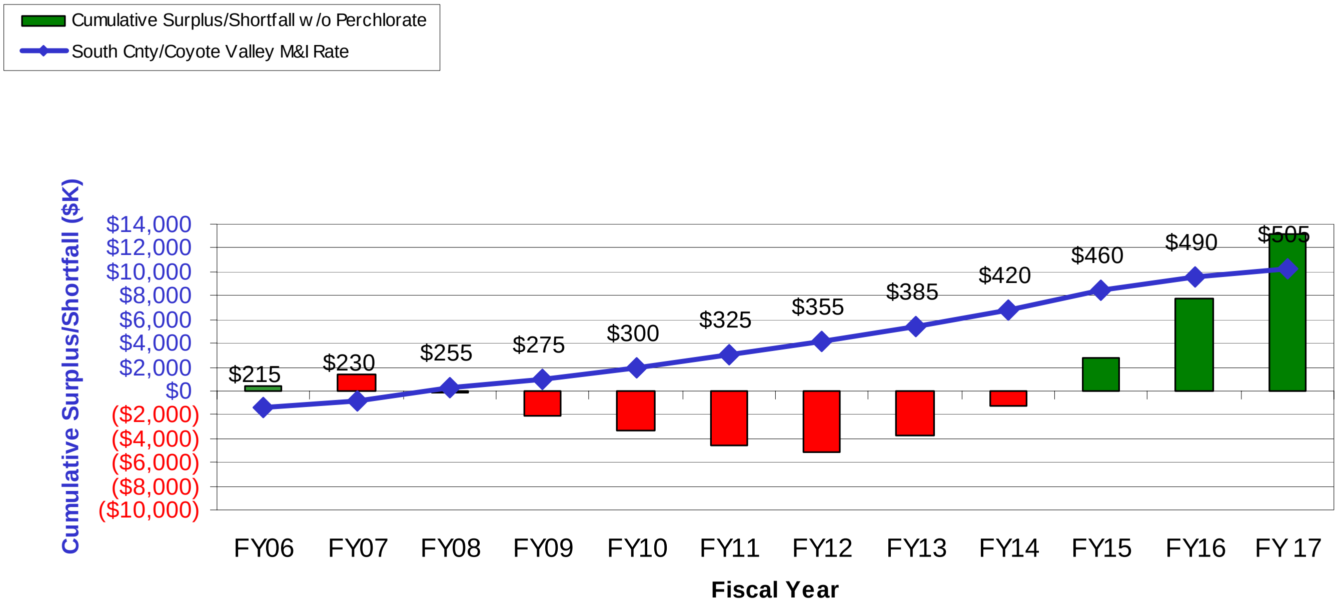
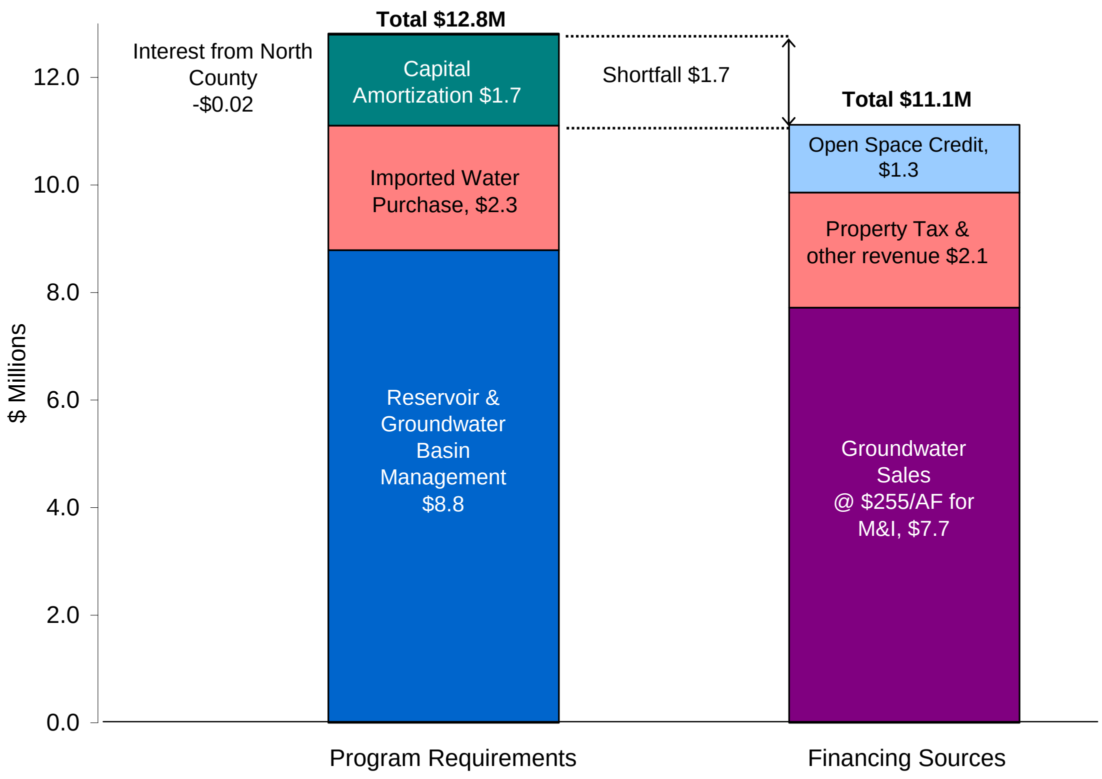


FIGURE 3-9
Fiscal Year 2007–08
South County/Coyote Valley Water Utility Program Requirements and Financing Sources
($ Millions)



Appendix A

WATER UTILITY WATER CHARGE COMPONENTS AND ADOPTED CHARGES

TABLE A-1
Adopted Water Charge Components for Fiscal Year 2007–08

Component	Charge ($/AF)
Basic User, Zone W-2 (North County)	
Agricultural	15.50
M&I	475.00
Basic User, Zone W-5 (South County/Coyote Valley)	
Agricultural	15.50
M&I	255.00
Treated Water Surcharge	
Contract	100.00
Non-contract[1]	100.00
Water Master	11.75
Capital Cost[2] Half Road Lateral System	0.00
Available Agricultural Discounts[3]	
Mobile Lab	0.00
INAAP	0.00

[1] Historically, the non-contract surcharge was offered for non-contract water taken from the Rinconada Water Treatment Plant only. The non-contract surcharge discount was eliminated in FY 2007–08 since the incentive to offer the discount no longer exists and because of dry surface water conditions.

[2] Recovery of capital costs related to the Half Road Lateral System have been adequately recovered. Therefore, this charge is no longer needed.

[3] The Board discontinued agricultural discounts beginning in FY 2007–08.

TABLE A-2
Adopted Water Charges for Fiscal Year 2007–08

Type of Charge	AG Water ($/AF)	M&I Water ($/AF)
Groundwater		
Zone W-2	$15.50	$475.00
Zone W2 with Mobile Lab & INAAP Discounts[1]	$15.50	N/A
Zone W-5	$15.50	$255.00
Zone W5 with Mobile Lab & INAAP Discounts[1]	$15.50	N/A
Surface Water[2]		
Half Road Deliveries[3]	$27.25	$266.75
Other Zone W-5 Deliveries[4]	$27.25	$266.75
Other Zone W-2 Deliveries[5]	$27.25	$486.75
Minimum Charge Zone W-5[6]	$191.25	$191.25
Minimum Charge Zone W-2[7]	$356.25	$356.25
Stored Water		
Zone W-2	$15.50	$475.00
Zone W-5	$15.50	$255.00
Treated Water		
Contract[8]	N/A	$575.00
Non-contract[9]	N/A	$575.00
Recycled Water		
Gilroy	$40.50	$244.00

[1] The Board discontinued agricultural discounts beginning in FY 2007–08. To avoid “rate shock” to growers who were participating in the discount programs, the Board lowered the agricultural charge.

[2] Surface water charge is the sum of the basic user charge plus the water master charge. It also includes the capital cost and power, wherever applicable.

[3] Half Road = Basic User (AG or M&I @ $15.50 or $255.00) + Water Master ($11.75).

[4] Other Zone W-5 Deliveries = Basic User (AG or M&I @ $15.50 or $255.00) + Water Master ($11.75).

[5] Other Zone W-2 Deliveries = Basic User (AG or M&I @ $15.50 or $475.00) + Water Master ($11.75).

[6] Minimum Charge W-5 = 0.75 X Basic User W-5 (M&I @ $255.00).

[7] Minimum Charge W-2 = 0.75 X Basic User W-2 (M&I @ $475.00).

[8] Treated Water Charge is the sum of Basic User ($475.00) and Treated Water Surcharge ($100.000/AF).

[9] The charge for non-contract deliveries is the sum of the basic user charge ($475.00) and the treated water surcharge for non-contract water ($100.00/AF).

Appendix B

DESCRIPTION OF WATER UTILITY REVENUE SOURCES, COST CENTERS, AND RESERVES

PRICING POLICY

The District's Board adopted Resolution No. 99-21 updating the Water Utility taxing and pricing policy in March 1999. This pricing policy incorporates four concepts: (1) water pooling, (2) water facilities cost pooling, (3) water resources management, and (4) revenue pooling. The complete policy follows after page B-4. The principal update to the policy in March 1999 was the Board's setting the agricultural water charge at 10 percent of the M&I charge in both Zones W-2 and W-5. Resolution No. 99-21 is included in this appendix.

WATER CHARGES

- Water charges include a **groundwater charge**, which is equivalent to the **basic user charge**, and is associated with the benefit of groundwater supplies. The groundwater charge is applied to water extracted from the groundwater basin in Zones W-2 and W-5, as shown in Appendix C. The basic user charge is applied to other types of water delivered by the District. There are two charges: one for agricultural water and one for M&I water.

- A **treated water surcharge**, which is associated with the benefit of receiving treated water, is levied in addition to the basic user charge on water delivered from the District's water treatment plants.

PROPERTY TAXES

Ad valorem taxes provide revenue to support several benefits which are general in nature serving all or large areas of the county. Some of these benefits are the availability of imported water to the county, recreation associated with the District's reservoirs, and replenishment of the county's groundwater subbasins.

The District receives a portion of the 1 percent countywide tax revenues as allocated by the County Assessor. Tax Zones W-3 and W-4, as well as a countywide ad valorem tax, are part of the 1 percent allocation. The District's share of the (post-Proposition 13) 1 percent ad valorem taxes are general taxes which are not earmarked but are available for any lawful District purpose.

The District also levies additional ad valorem taxes under Article XIII A of the State Constitution to meet: (a) prior approved general obligation bond debt service in Zone W-1 (zones are shown on the map in Appendix C) and (b) part of the contractual obligations for California State Water Project water with a countywide tax.

DEBT FINANCING

To fund the construction of new facilities, the District has historically relied on both pay-as-you-go financing and long-term debt financing from revenue bonds as authorized by the voters in 1977. The last remaining 1977 authorized revenue bonds were sold in April 1984. In January 1984, state legislation allowed the District to seek authorization to issue revenue bonds as needed following the Board's approval. County voters approved this authorization in November 1984. The District sold an additional $30 million of revenue bonds in November 1985 to provide needed funding for ongoing projects. In August 1986, the District refunded all outstanding water revenue bonds. Again, in June 1994, the District took advantage of favorable market conditions to refund the remaining 1986 water revenue bonds. The 1994 refunding totaled $65.9 million at an effective interest rate of 5.2 percent. In December 2000, the District issued tax-exempt and taxable bonds in the amount totaling $60.3 million. In January 2003, the District decided to take advantage of the lower interest rates offered through short-term debt and entered into a $100 million commercial paper program. In 2006, the District's water utility refunded approximately $55 million of 2000 outstanding revenue bonds and $40 million of outstanding commercial paper. The District plans to issue certificates of participation in FY 2006–07 in the amount of approximately $90 million.

WATER UTILITY RESERVES

There are multiple reserves designated in the Water Utility Enterprise Fund. Policies and procedures for fund balance reserves, as approved by the District Board of Directors in 2001 can be found on page B-11. A staff-proposed policy can also be found here.

WATER UTILITY ZONES

The major sources of water revenue are from charges levied on all groundwater extracted within Zone W-2 and Zone W-5 of the District and from the sale of approximately 135,000 AF of treated water. Other water charges are made for surface water diversions and sales of recycled water in the Gilroy area. A brief description of each water zone (see Water Utility Zones map in Appendix C) within the Water Utility Enterprise follows:

Zone W-1: Encompasses the groundwater basin in the northern county and small peripheral areas outside the groundwater basin, with the retail service areas of privately-owned public utilities and municipal water departments using water pumped from the groundwater basin. This area provides the security for general obligation bonds. Zone W-1 comprises an area of approximately 290 square miles and includes all or portions of 13 of the county's 15 cities, plus some unincorporated territory.

Zone W-2: Encompasses the Santa Clara Valley groundwater basin north of Metcalf Road. It includes those groundwater producing facilities that benefit from recharge of the basin with local and imported water. A charge is levied for all groundwater extracted from this zone.

Zone W-3: Encompasses the Coyote and Llagas groundwater basins in the area from Metcalf Road in the north to just south of the City of Morgan Hill. Part of the county property tax within the 1 percent limit is allocated to this zone.

Zone W-4: Contains all of Zone W-2 and lands outside Zone W-2 that use or otherwise benefit from locally conserved water and from the importation and distribution of water from the South Bay Aqueduct. This area also receives an allocation of county taxes. These tax revenues are used to pay for the cost of water, recovery of accumulated overdrafts, control of land surface subsidence, and to sustain the emergency supply of water.

Zone W-5: Is comprised of the entire groundwater basin from Metcalf Road south to the Pajaro River. Charges are levied for all groundwater extracted from this zone.

Zone W-6: Represents the former Gavilan Water Conservation District and is within Zone W-5.

WATER UTILITY COST CENTERS

The Source of Supply Cost Center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply and includes all District conservation, recycling, and importation costs.

The Raw Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems.

The Water Treatment Cost Center contains all expenditures associated with the treatment of water at the Rinconada Water Treatment Plant, Penitencia Water Treatment Plant, and Santa Teresa Water Treatment Plant.

The Treated Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of treated water to water utilities and includes costs associated with the treated water reservoirs, pumping plants, pipelines, and turnouts.

The Administration and General Cost Center contains all expenditures of an administrative nature, which are not assigned to one of the other four cost centers. Work performed in this cost center covers items such as the collection of groundwater charges, financial and cash flow studies, annual reports, and general water quality management and resource planning.

Appendix B

RESOLUTION 99-21:
ADOPTING "WATER UTILITY TAXING AND PRICING POLICY" AND RESCINDING RESOLUTION NO. 96-82

RESOLUTION NO. 99- 21

ADOPTING "WATER UTILITY TAXING AND PRICING POLICY" AND RESCINDING RESOLUTION NO. 96-82

WHEREAS, the Santa Clara Valley Water District (District) adopted a District mission, goals and objectives on February 19, 1985, in order to conduct a sound water management program that serves the community; and

WHEREAS, the District Act authorizes the District to enter into water sales contracts and to levy and collect taxes and assessments on property within the District and in the respective zones of the District and sets forth requirements for groundwater charges and rates between agricultural and nonagricultural water; and

WHEREAS, several Board resolutions, as identified in Exhibit "A," are related to the management of water resources and the implementation of this water taxing and pricing policy; and

WHEREAS, several changes which affect revenue sources and benefit distribution have occurred since adoption of Resolution No. 96-82. These changes include: (1) passage of Resolution Nos. 98-44 and 98-45 setting agricultural charges for groundwater and surface water at 10 percent of the nonagricultural charges; (2) revisions to the policy governing sale of noncontract water in 1998; (3) pending completion of an agreement to act as the wholesaler to deliver recycled water in South County.

BE IT RESOLVED, by the Board of Directors of the District as follows:

1. **The policy of the District in the areas of taxation and water pricing for water utility revenues shall be and is hereby adopted**:

Policy Statement

The intent of this water utility taxing and pricing policy is to provide revenue for the management of water resources and operation of the water utility enterprise. This policy establishes a framework for establishing a system of water charges as permitted by the District Act to meet revenue requirements and to allocate costs amongst the beneficiaries. The general approach is to charge the recipients of the various benefits for the benefits received from the District's comprehensive water utility program.

The consumptive and nonconsumptive benefits provided by District water supply facilities and operations are listed and described below:

- Provision of a water supply and effective management of water resources available to the community from a variety of sources of supply, transmission, and water treatment facilities operated by the District.
- Protection of water quality through the purification and treatment of water and the protection of water supplies.
- Stewardship of watersheds and riparian corridor.
- Administration of related programs and projects such as recycled water and water conservation administered solely by the District or in partnership with another organization.

- Ancillary flood protection.
- Recreation, such as fishing, boating, picnicking, hiking, and other related recreation activities.
- Support for the economic well being of the community.
- Protection of the community infrastructure from subsidence.

2. Policy Implementation

The following water taxing and pricing concepts and framework shall be implemented in order to provide for revenue in order to continue providing direct and ancillary benefits to the customers of the District and the community of Santa Clara County.

Water Taxing and Pricing Concepts

- ***Water Pooling***: Water is considered to be a single commodity irrespective of the water's source or cost. It is a single commodity whether it is from water provided locally, imported, or recycled, and all users benefit from the availability of multiple sources of water.
- ***Water Facilities Cost Pooling***: All water supply facilities contribute to the common benefit of effective water resources management. In general, the water charges and property taxes are based on the common benefits of the capital and operations outlays, rather than reference to named facilities, with the exception of the liability for bonded indebtedness which is applied to each zone of benefit.
- ***Water Resources Management***: Water supplies are managed, through taxing and pricing, to obtain the effective utilization of the water resources of the District to the advantage of the present and future populations of the County. This concept provides for development of taxing and pricing structures that will achieve the effective use of available resources and conserve supplies for potential drought conditions.
- ***Revenue Pooling***: For the most part, water utility revenues are collected in a common fund and not designated for a specific cost. Such revenues are available for the general capital and operating outlays of the water utility enterprise. Some revenues such as certain property taxes are specifically designated for debt service and the fixed costs of the State Water Project, and are not available to the common fund. Water charges are established to provide the revenues that are required in the common fund for general capital and operating outlays and that are over and above revenues from ad valorem taxes, interest, and miscellaneous sources. This provides flexibility in managing continuing operations and funding capital outlays.

Water Taxing and Pricing Framework

The following procedures are intended as a general framework to guide staff in the development of a water rate structure implementing this policy:

- ***Zones of Benefit***: Zones of benefit are to be identified and established in accordance with the District Act. Groundwater charges and property taxes are levied for the benefits received by the water users and property owners benefitting from that zone. For each zone, a basic water user charge is determined for current groundwater and raw surface water users to be applied to the quantities of water used or consumed.

- ***Basic Water Charge Zones***: The objective of establishing various water charge zones is to recover costs for the benefits resulting from conservation, import, and recharge of water which occur only within that zone. Water charges are levied for water producing operations, such as groundwater pumping and raw surface water diversion. In addition, users may be subject to specific charges that meet special needs of a group of users, such as water master charges for surface water deliveries, a capital charge for equipment or facilities, and power costs for pumping.

- ***Treated Water Surcharge***: A treated water surcharge shall be added to the basic water charge for the price of treated surface water delivered by the District. The charge is to be established at an amount that would promote the effective use of available water resources. The charge may differ between treatment plants to better manage regional variations in groundwater conditions.

- ***Costs for Specific Benefits***: Whenever costs associated with specific benefits are clearly and easily measurable, those costs shall be charged to the beneficiaries, in accordance with their specific zones of benefit. Where there is a question as to the identity of the beneficiary or the method of measuring the benefit, the allocation of costs should remain flexible and be determined in accordance with accepted practices and sound judgements based on the four water pricing concepts. The District recognizes and supports the State Legislature's limitation imposed on the District that rates for agricultural water shall not exceed one-fourth of the rate for all water other than agricultural water. In order to encourage the continuance of agricultural use of land in the County, to encourage the preservation of open space, to defer intensification of users and to further support the limitation imposed by the State Legislature, it is the District's policy that rates for agricultural water shall not exceed one-tenth the rate for all water other than agricultural water.

  Both water charges and property taxes are used to recover costs incurred for the benefit of current water users. The costs for future supply sources can be recovered using current revenues or through project specific long-term financing.

- ***Balancing Costs***: The District recognizes that there may be imbalances between revenues and costs within a zone of benefit from year to year. The District will strive to achieve balance over the long-term in accordance with the District Act and to properly charge recipients for the benefits received.

- ***Incentives***: Incentives in the form of subsidies may be provided in order to reduce the price of specific sources of water in order to optimize use of available or future water resources.

- ***Recycled Water***: From time to time, the District may enter into agreements to provide wholesale delivery or other services related to recycled water. The District will strive to recover the costs of these facilities consistent with the pooling concepts outlined above, while adhering to the specifics of any agreement.

3. Executive and Staff Limitations

District staff are authorized to develop a water rate structure which meets the objectives set forth herein, in accordance with the District Act, and using the concepts set forth above. The District's rate structure is implemented only by resolutions approved by the Board of Directors.

Staff is authorized to recommend water charges for consideration by the Board in accordance with the District Act. Water charges, if any, shall be recommended by staff each year be at fixed and uniform rates for agricultural water and for all water other than agricultural water, respectively, except that each such rate for agricultural water shall be one-tenth of the rate for all water other than agricultural water. The Board has determined that agricultural use of lands is of value to the County and the state, and that agricultural lands provide an open space benefit. The Board's limiting staff to a recommendation of agricultural water rates below the maximum allowed by the District Act will benefit water users Countywide, and is necessary to carry out the policies of the State Legislature and the District Board of Directors.

Staff is authorized to prepare, for the Board's consideration, resolutions for the collection of property taxes as needed and authorized under applicable laws.

4. Previous Policy Rescinded

The "Water Taxing and Pricing Policy," adopted by Resolution No. 96-82, is hereby rescinded.

PASSED AND ADOPTED by the Board of Directors of Santa Clara Valley Water District on March 16, 1999 by the following vote:

AYES: Directors Gross, Zlotnick, Judge, Kamei, Sanchez, Estremera, Wilson

NOES: Directors None

ABSENT: Directors None

SANTA CLARA VALLEY WATER DISTRICT

By: ______________________
Chair/Board of Directors

ATTEST: LAUREN L. KELLER

Lauren L Keller
Clerk/Board of Directors

EXHIBIT "A"

SANTA CLARA VALLEY WATER DISTRICT BOARD RESOLUTIONS USED AS A BASIS FOR WATER TAXING AND PRICING POLICY

Resolution 68-4 to govern the management of its water supply and water facilities so as to equalize the availability of water throughout the District by every means available to it to the fullest extent consistent with equity and sound conservation principles; and

Resolution 71-19 adopting "Water Taxing and Pricing Policy;" and

Resolution 74-28 adopting rules and regulations for the service of surface water and establishing a fee and charge structure; and

Resolution 79-87 providing for water importation tax credits and repealing prior resolution which was adopted November 23, 1964.

Resolution 81-44 declaring policy regarding payment of in-county credit for ensuing fiscal years and that no unit rate is provided for the in-county credit and no payments made from and after fiscal year 1983-1984.

Resolution 90-73 adopting and authorizing the filing and implementation of the Santa Clara Valley Water District Urban Water Management Plan which provides for water conservation efforts which are funded by the District.

Appendix B

SANTA CLARA VALLEY WATER DISTRICT
POLICIES AND PROCEDURES FINANCIAL SERVICES FUND BALANCE RESERVES

District Reserves

Overview

Introduction

The following Fund Reserves Policy is established in accordance with the Board's Executive Limitation, EL-5 and 5.3, "With respect to the actual, ongoing financial condition and activities, the GM shall not cause or allow the development of fiscal jeopardy or a material deviation of actual expenditures from Board priorities established in Ends policies." "Further, without limiting the scope of the foregoing by this enumeration, he or she shall not use any unappropriated long-term reserves or undesignated fund balance."

Based on the GM's interpretation of the above policy, District Fund Balance Reserve policies and procedures have been developed and outlined herein.

The objective of this policy is to ensure the provision of adequate reserves and to provide guidance for the appropriate accumulation and use of District Reserve Funds. In addition to this policy, both long-term goals and short-term objectives will influence and direct the allocation of annual operating funds for the various reserves. The District classifies reserves as either Operating, Capital, Debt Service, or Funded and Contingent Liabilities.

Purpose

Fund Reserves represent a portion of fund balance that is segregated for a specific future use, or is not available for appropriation or expenditure. Adequate reserve levels are a necessary component of the District's overall financial management strategy and a key factor in external agencies' measurement of the District's financial strength.

General Policies

This policy establishes the purpose and use of such reserve funds, as well as the procedures for funding and maintaining reserves.

- Each fiscal year, the District establishes reserve appropriations necessary to meet its legal covenants, set aside cash to pay expenses prior to the receipt of tax revenues, provide for prudent funding of operating contingencies and contingent liabilities, and sustain its capital improvement program.
- There are four categories of reserves: Operating, Capital, Funded and Contingent Liabilities, and Debt Service
- Reserves are to be fully funded each budget year, or staff will establish an intermediate- and long-term funding plan for the reserve as part of the budget process.
- Budgeted reserves may vary from those of the Comprehensive Annual Financial Report (CAFR) where it is appropriate to recognize actual cash transactions that are recorded in the CAFR as liabilities. Such adjustments include recognizing inter-fund loans, commercial paper financing, and certain accruals as funding sources available for appropriation or as funding uses that reduce funds available for other purposes. These adjustments must be annually reconciled to the audited CAFR.

- Reserve funds will not be spent for any function other than the specific purpose of the reserve from which they are drawn, without explicit Board approval for the exception. All appropriations from reserve accounts require Board approval.

- Debt Service Reserves are administered by debt trustees and set at levels established by loan covenants.

- All remaining reserves shall be reviewed each year by staff to determine reserve level requirement recommendations within guidelines established by this interpretation of Board policy.

Operating Reserves

Contingency Reserves

The appropriations for contingencies are set at a fixed amount at the beginning of the fiscal year to provide for unforeseen needs and emergency appropriations during the year. The appropriated amounts are established as follows:

Water Enterprise Fund: Up to 1% of Budgeted Operating Outlays

District General Fund: Up to 0.5% of Budgeted Operating Outlays

All Other Funds: Up to 1.3% of Budgeted Operating Outlays per each Fund

Working Capital Reserves

This reserve establishes available cash assets from which operating and capital expenditures are made prior to the receipt of revenues for the fiscal year. The budget provides for the following levels of reserve:

Water Enterprise Fund: One month (1/12) of budgeted operating outlays (Required under Water Revenue Bond Resolution 94-58 and the Second Supplemental Resolution No 2000-64)

District General Fund: Up to half (1/2) of estimated property tax revenues

Watershed Funds: Up to half (1/2) of budgeted operating outlays

Other Operating Reserves

The following reserves have been established at contractual or recommended levels appropriate to the specific purpose of each reserve:

Supplemental Water Supply Reserve: This reserve is to provide funding for supplemental water purchases, participation in water banking or conservation opportunities, and other water supply needs. The reserve level should not exceed $11 million, which represents the highest annual amount expended for supplemental water supply needs.

Rate Stabilization Reserve: Reserve established to both 1) mitigate fluctuations in water charges by providing funding during periods of extraordinary operating expense or water revenue shortfalls, and 2) to supplement District revenues to meet debt service coverage requirements. The budgeted reserve levels should not be less than 10% of annual debt service due on all Parity Obligation.

San Felipe Reserve: This is the sum of three reserves established pursuant to the District contracts with the U.S. Bureau of Reclamation for operation and maintenance of the San Felipe Division of the Central

Valley Project. If used, the reserve level must be restored to a minimum of $1.75 million plus accrued interest, and not to exceed $10 million.

Environmental Water Banking Reserve: This reserve provides a mechanism to ensure funds are available to meet financial obligations generated by the agreement between the Department of Water Resources of State of California (DWR), the District, and Kern County Water Agency of 2001 Water Resources for Support of the Environmental Water Account under the CALFED Program. The reserve level should not exceed $15 million, and it is based on revenues or other funding sources received in excess of cost.

Maintenance of Newly Improved Creeks: Clean Safe Creeks and Natural Flood Protection Reserve: This reserve is established to appropriate special tax revenues for future maintenance of the nine flood protection projects approved by the voters. Funds remaining in this reserve at the end of the 15-Year Clean Safe Creeks and Natural Flood Protection Program will be available for maintenance of the creek facilities in subsequent years.

Other Clean Safe Creeks Activities Reserves: This Clean Safe Creeks and Natural Flood Protection Fund reserve is established to appropriate special tax revenues for operating expenditures in future years necessary to accomplish the programs and projects approved by the voters. Funds remaining in this reserve at the end of the 15-Year Clean Safe Creeks and Natural Flood Protection Program will be available for these purposes in subsequent years.

Reserved for Encumbrances: Outstanding encumbered purchases, contracts, and other commitments for which the District bears an obligation are recorded as liabilities. These reservation of Fund Balance and Fund Equity represent funds set aside to ensure payment of the District's liabilities. The reserve's balances are adjusted annually to reflect total obligations at year-end, as per Generally Accepted Accounting Principles reporting requirements.

Capital Reserves

The District currently budgets three types of Capital Reserves.

Capital Replacement Reserves: The purpose of this reserve is to accrue funding for asset purchases and replacement in the period of use. Through this funding reservation, monies are set aside for planned future asset expenditures within specified categories. In addition, this reserve provides a funding source for unplanned asset purchases, and assists with asset management and long-range planning. The reserve level is equal to annual depreciation in each fund.

Future Years' Capital Reserves: This reserve is provided within each Fund in support of future capital needs, as projected in the District's 15-year Capital Improvement Plan. For the Clean, Safe Creeks Program Fund, the remainder of both operating and capital revenues not otherwise re-appropriated to restore the fund's operating reserves to their authorized amounts, are appropriated to this reserve for use in financing projects on a pay-as-you-go basis. For all other funds, Future Years Capital Reserve is funded with the remainder of revenues not otherwise needed to restore all other capital reserves and contingencies to their authorized amounts.

Designated for Current Authorized Projects: This reserve provides for the funding of remaining authorized capital appropriations as of the close of the fiscal year. Capital Projects operate on a multi-year basis; hence all amounts approved but unspent on currently active Capital Projects may carry forward (with the exclusion of unspent labor and benefits) in this reserve until the projects are complete. This is in accordance with the Budget resolution, which provides for reappropriation of prior year, unspent capital budget.

Reserves For Funded and Contingent Liabilities:

These reserve funds are established at recommended levels appropriate to the specific purpose of each reserve, for the purpose of discharging a future contingent liability.

Water Enterprise - Bureau Repayment Reserve: Established by Board policy to provide funding for the District's future contractual liability to the U.S. Bureau of Reclamation, Central Valley Project.

Risk Insurance Reserves: Established by Board policy to fund the District's contingent liabilities for general liability, property damage, and worker's compensation under the District's self-insurance program. The amount of this reserve is reviewed bi-annually under an independent actuarial evaluation.

PERS Stabilization Reserve: This reserve is established to mitigate the escalating costs of employer contributions to the California Public Employees Retirement System (PERS). This reserve is established for FY 2003-04 and FY 2004-05 to appropriate prior year-end salary and other expenditure savings as practicable to be available for use beginning in FY 2005-06 to mitigate substantial PERS employer contribution expenses. In FY 2005-06, this Reserve will be re-evaluated and recommendations will be brought to the Board regarding its future use.

State Budget Impact Reserve: Established in anticipation of a one-time 1% Ad Valorem property tax shift for FY 2004-05 and FY 2005-06 from the District to the Education Revenue Augmentation Fund (ERAF).

Debt Service Reserves:

Debt Service Reserves

Debt Service Reserves are to provide a reservation of funds for current debt service payment on outstanding debt.

Reserves are established in accordance with Bond or Certificate of Participation (COP) resolutions and initially funded from proceeds of the issuance. Each Debt Service Reserve Fund is required to be maintained in accordance with resolution mandates.

Debt Service Reserves are held and administered by the issuance trustee, to be used for payment of the principal and interest in the event that on any payment date the fiscal agent does not receive sufficient installment payments for the District for such purpose.

Appendix B

SANTA CLARA VALLEY WATER DISTRICT

STAFF-PROPOSED REVISION TO RESERVE POLICY

Reserve Policy – Proposed Revision

Please note: Shaded text is old policy language.

The Santa Clara Valley Water District reserves are categorized either as restricted or designated. Designated reserves are further categorized as Operating, Capital, and Contingent Liabilities. The purpose, funding level, and reserve uses are presented below.

RESTRICTED RESERVES:

Debt Service Reserves:
These reserves were established for various bond issues. The funds are not available for general needs of the District and must be maintained as dictated in the bond covenants of the various issues. Not all bond issuances may have all of the following reserves, but the primary debt reserves are: Debt Service Reserve Fund (to fund payments should the District not be able to make its debt service payments due to cash shortfalls), Arbitrage Rebate (to accumulate funds to offset the potential liability from excess earnings) and Debt Service Payment Fund (a pass through reserve for initiating debt service payments).
No prior language.

Debt Proceeds Reserves:
Bond covenants prescribe the use of debt financing proceeds. Debt proceeds typically fund capital projects as described in various bond issues. Debt proceeds, however, are not claimed until project expenses are incurred. Unclaimed debt proceeds are held in trust and identified in Debt Proceeds Reserves.
No prior language.

Water Utility Enterprise – Restricted Operating Reserve:
Revenue Bond covenants for the Water Utility Enterprise require the provision of an Operating Reserve that is only to be used to meet operating needs if there are no other funding sources available. The minimum funding level required by bond covenants is one month of maintenance and operations costs. Any amounts in excess of the minimum are discretionary and therefore held in the Designated Operating Reserve.

Working Capital Reserves: This reserve establishes available cash assets from which operating and capital expenditures are made prior to the receipt of revenues for the fiscal year. The level of the reserve is established based upon the source and timing of the expected receipt of revenues. The budget provides for the following levels of reserve:

- Water Enterprise Fund: One month (1/12) of budgeted operating outlays
  (Required under Water Revenue Bond Resolution 94-58 and the Second Supplemental Resolution No 2000-64)

Water Utility Enterprise – Rate Stabilization Reserve:
Revenue Bond covenants for the Water Utility Enterprise require the provision of a Rate Stabilization Reserve to offset extraordinary expenses and revenue shortfalls, and to supplement District revenues to meet Debt Service Coverage requirements. The minimum funding level required by bond covenants is 10 percent of annual debt service due on all Parity Obligations with the maximum capped at the 20 percent level per this policy. The specific level set within this range is to be financially prudent and based on reasonably anticipatable needs.

- **Rate Stabilization Reserve:** Reserve established to both (1) mitigate fluctuations in water rates by providing funding during periods of extraordinary operating expense or water revenue shortfalls, and (2) to supplement District revenues to meet debt service coverage requirements. The budgeted reserve levels should not be less than 10% of annual debt service due on all Parity Obligation.

Water Utility Enterprise – San Felipe Emergency Reserve:
This reserve is required by District contractual obligations with the U.S. Bureau of Reclamation for the operation and maintenance of the San Felipe Division of the Central Valley Project. The purpose of the reserve is to provide resources for unusual operation and maintenance costs incurred during periods of special stress caused by damaging droughts, storms, earthquakes, floods, or emergencies threatening or causing interruption of water service. Use of this reserve requires authorization by the U.S. Department of the Interior. Per contract, the funding level is accumulated in annual deposits of $200,000 until the reserve totals $1.75 million after which interest earned on the reserve is deposited annually.

- **San Felipe Reserve:** This is the sum of three reserves established pursuant to the District contracts with the U.S. Bureau of Reclamation for operation and maintenance of the San Felipe Division of the Central Valley Project. If used, the reserve level must be restored to a minimum of $1.75 million, and not to exceed $10 million.

Encumbrance Reserves:
These reserves represent the outstanding balances of contractual obligations with outside parties for goods or services that the District intends to honor. These reserves are the funding sources for payments authorized after final acceptance of the goods or services.
No prior language.

Market Valuation Reserves:
The District established Market Valuation Reserves to segregate the value of investment earnings over book value if all investments had been sold on June 30 of the last fiscal year. These reserves do not represent cash available for appropriation. They are used to ensure that a Governmental Accounting Standards Board financial reporting requirement does not result in an overstatement of funding available for expenditure.
No prior language.

DESIGNATED OPERATING RESERVES:

Operating Reserves:
Operating Reserves serve several purposes: to ensure adequate working capital for cash flow needs; to provide a funding source for operating needs that arise during the year and, in the case of the Water Utility, to protect against revenue shortage caused by unusually wet years. The funding range for the Water Utility and the Watershed Funds is a minimum of 10 percent to a maximum of 50 percent of budgeted operating expenses. For the General Fund and Internal Service Funds, the funding range is a minimum of 5 percent to 25 percent of budgeted operating expenditures. The specific level set within these ranges is to be financially prudent and based on reasonably anticipatable needs.

Contingency Reserves: The appropriations for contingencies are set at a fixed amount at the beginning of the fiscal year to provide for unforeseen needs and emergency appropriations during the year. The appropriated amounts for FY 2003-04 are:

- Water Enterprise Fund - One percent (1%) of Budgeted Operating Outlays
- District General Fund - Half percent (0.5%) of Budgeted Operating Outlays
- All Other Funds - 1.3% of Budgeted Operating Outlays per each Fund

Working Capital Reserves: This reserve establishes available cash assets from which operating and capital expenditures are made prior to the receipt of revenues for the fiscal year. The level of the reserve is established based upon the source and timing of the expected receipt of revenues. The budget provides for the following levels of reserve:

- Water Enterprise Fund: One month (1/12) of budgeted operating outlays

(Required under Water Revenue Bond Resolution 94-58 and the Second Supplemental Resolution No 2000-64)

- District General Fund: Up to half (1/2) of estimated property tax revenues
- Watershed Funds: Up to half (1/2) of budgeted operating outlays

Water Banking and Supplemental Water Supply Reserve:
This reserve is to fund purchases of water to augment supplies when needed and to participate in water banking, conservation, or water recycling activities. This reserve will also be used to store revenues and meet obligations from transactions to support the CALFED Environmental Water Account. In addition, this reserve is maintained to supplement revenue losses in the event of a drought. This reserve should be set at a level that represents one year (minimum) to four years (maximum) of supplemental water purchase costs anticipated in a dry year, plus one year (minimum) to five years (maximum) of “take” fees associated with withdrawing banked water under the District’s agreement with Semitropic, plus estimated costs to close out agreements under the CALFED Environmental Water Account. Based on current water supply planning for a single dry year, supplemental water purchase costs are estimated at $5 million for 20,000 to 30,000 acre-feet of water, and “take” fees are estimated at $4 million to withdraw the maximum amount in a single year from the bank (roughly 35,000 acre-feet).

- **Supplemental Water Supply Reserve:** This reserve is to provide funding for supplemental water purchases, participation in water banking or conservation opportunities, and other water supply needs. The reserve level should not exceed $11 million.
- **Environmental Water Banking Reserve:** This reserve provides a secure mechanism to make sure funds are available to meet financial obligations generated by the agreement between the Department of Water Resources of State of California (DWR), the District, and Kern County Water Agency of 2001 Water Resources for Support of the Environmental Water Account Under the CALFED Program. The reserve level should not exceed $15 million.

DESIGNATED CAPITAL RESERVES:

Capital Replacement Reserves:
The purpose of this reserve is to provide funding to replace or refurbish District facilities. It can be used to set aside monies for planned future repair and replacement work, to fund unanticipated asset management needs in the current year, or to mitigate large asset management expenditures. This reserve will be set at a level that represents one (minimum) to five (maximum) years of average annual forecasted asset management investment.

- **Capital Replacement Reserves:** The purpose of this reserve is to accrue funding for asset purchases and replacement in the period of use. Through this funding reservation, monies are set aside for planned future asset expenditures within specified categories. In addition, this reserve provides a funding source for unanticipated asset needs, mitigates the impact of large budget expenditures, and assists with asset management and long-range planning. The reserve level is equal to annual depreciation in each fund.

Currently Authorized Projects Reserve:
District policy provides for annual re-appropriation of unspent, unencumbered capital project balances. The Currently Authorized Projects Reserves are used to account for these funds. The funding level for these reserves are based on the year-end capital project balances that will be re-appropriated to the same capital projects at the start of the next fiscal year.
No prior language.

Future Years' Capital Reserves:
The District uses three primary funding vehicles for capital project financing: debt financing, pay-as-you-go, and save-until-you-can-pay. Future Years' Capital Reserves primarily represent current funding accumulated for future year capital projects identified in the District's Capital Improvement Program. These reserves also may be used for unanticipated current year capital project changes. The funding level is set based on remaining available resources after operating and contingency needs have been met and Currently Authorized Projects Reserves have been funded.

- **Future Years' Capital Reserves:** This reserve is provided within each Fund in support of future capital needs, as projected in the District's 15-year Capital Improvement Plan. For the Clean, Safe Creeks Program Fund, the remainder of both operating and capital revenues not otherwise re-appropriated to restore the fund's operating reserves to their authorized amounts, are appropriated to this reserve for use in financing projects on a pay-as-you-go basis. For all other funds, Future Years Capital Reserve balance is the accumulated remainder of revenues not otherwise re-appropriated to restore all capital reserves and contingencies to their authorized amounts.

DESIGNATED LIABILITY AND OTHER RESERVES:

Water Utility Enterprise – Bureau Repayment Reserve:
Established by Board policy to provide funding for the District's future contractual liability to the U.S. Bureau of Reclamation, Central Valley Project.

- **Water Enterprise - Bureau Repayment Reserve:** Established by Board policy to provide funding for the District's future contractual liability to the U.S. Bureau of Reclamation, Central Valley Project.

Appendix C

ACRONYMS AND MAPS

ACRONYMS

ABAG	Association of Bay Area Governments
AF	Acre Feet
AG	Agricultural
AGM	Assistant General Manager
BAWAC	Bay Area Water Agencies Coalition
BAWSCA	Bay Area Water Supply and Conservation Agency
BDCP	Bay Delta Conservation Plan
BMP	Best Management Practices
CAPE	California Awards for Performance Excellence
CIP	Capital Improvement Plan
COP	Certificate of Participation
CPS	Capital Programs Services
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
DSOD	Division of Safety of Dams (California)
DWR	Department of Water Resources
EBMUD	East Bay Municipal Utility District
ET	Evapotranspiration
EWA	Environmental Water Account
FAHCE	Fisheries and Aquatic Habitat Collaborative Effort
FY	Fiscal Year
GM	General Manager
HAZMAT	Hazardous Materials
HCP/NCCP	Habitat Conservation Plan/National Communities Conservation Plan
HET	High Efficiency Toilet
INAAP	In-field Nutrient Assessment Assistance Program
IRWMP	Integrated Regional Water Management Plan
IWRP	Integrated Water Resources Planning. Also refers to the 1997 IWRP
IWRP 2003	District's 2003 IWRP Study
LFRO	Low-fouling Reverse Osmosis
MF	Microfiltration
M&I	Municipal and Industrial
MOU	Memorandum of Understanding
MWD	Metropolitan Water District of Southern California
PCE	Perchloroethylene
PVWMA	Pajaro Valley Water Management Agency
PWTP	Penitencia Water Treatment Plant
RWQCB	Regional Water Quality Control Board
RWTP	Rinconada Water Treatment Plant
SBCWD	San Benito County Water District
SCRWA	South County Regional Wastewater Authority
SCVURPPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SCVWD	Santa Clara Valley Water District
SFPUC	San Francisco Public Utility Commission
STWTP	Santa Teresa Water Treatment Plant
SWP	State Water Project
T&D	Transmission and Distribution
ULFT	Ultra-low-flush Toilets
USBR	U.S. Bureau of Reclamation
UWMP	Urban Water Management Plan
WET	Water Efficient Technologies
WRDA	Water Resources Development Act
WTP	Water Treatment Plant
WUE	Water Utility Enterprise

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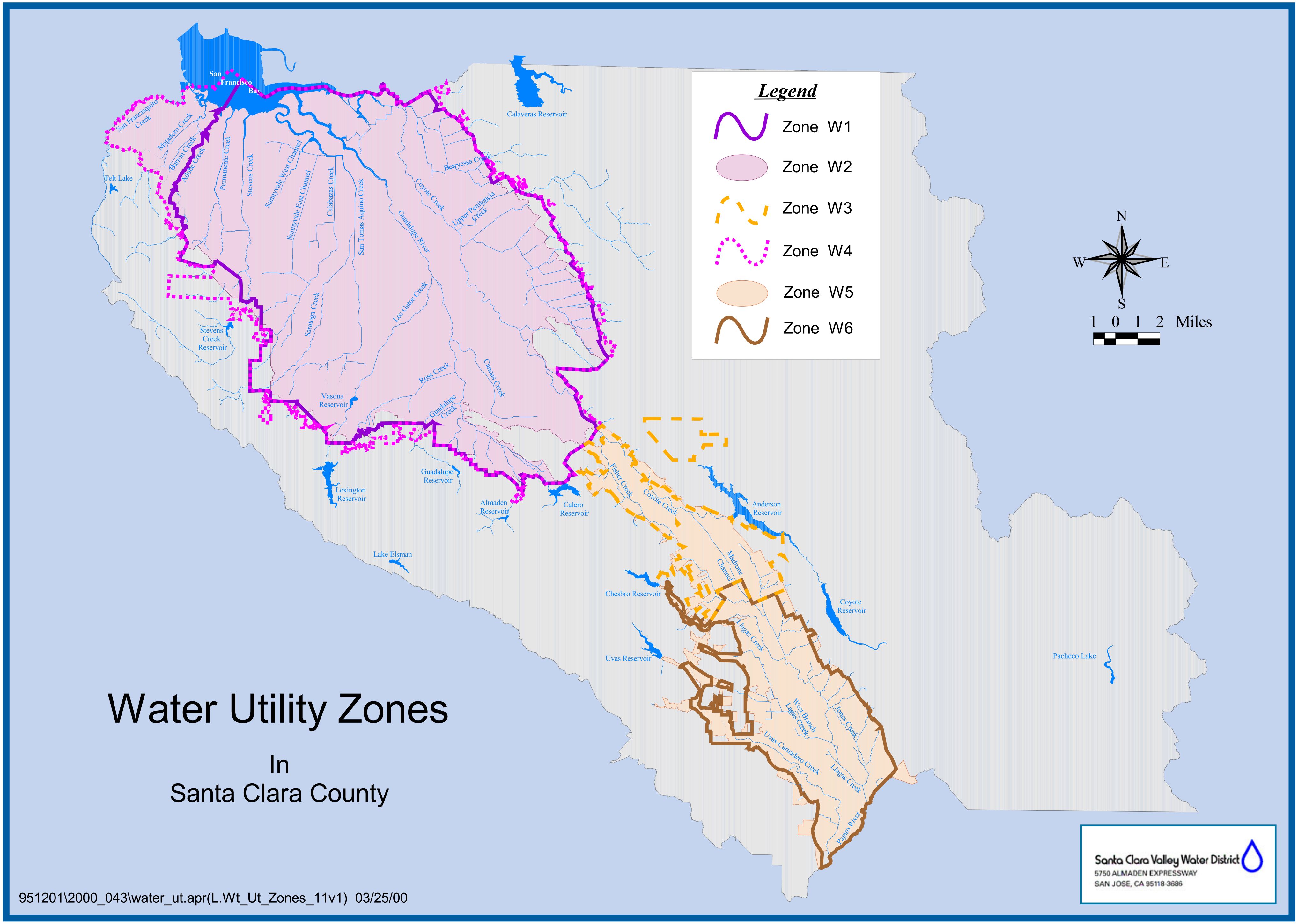

Water Utility Zones

In
Santa Clara County

Santa Clara Valley Water District
5750 ALMADEN EXPRESSWAY
SAN JOSE, CA 95118-3686

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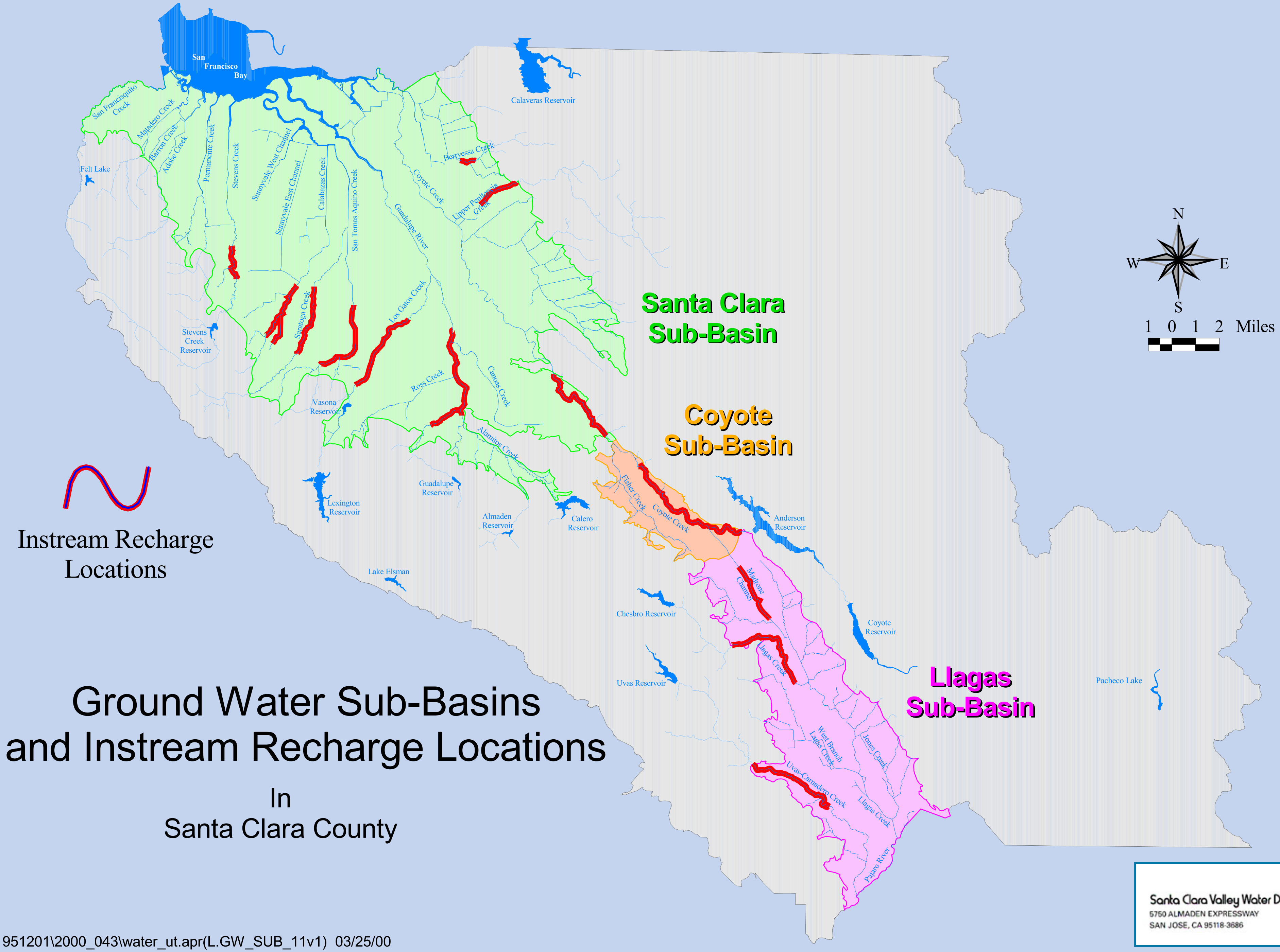

Ground Water Sub-Basins and Instream Recharge Locations

In

Santa Clara County

Santa Clara Valley Water District
5750 ALMADEN EXPRESSWAY
SAN JOSE, CA 95118-3686

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